Poster Abstracts P-01–P-319

P-001

CD86 Co-stimulatory Molecule Expression on Cultured Human Endothelial Cells

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Background. Endothelial cells (ECs) are involved in several immune mediated conditions and in chronic inflammation and an important matter of debate is whether ECs, both in resting or activated state, express the repertoire of co-stimulatory molecules such as CD86 (B7.2), for adequate T cell interaction/activation (1, 2).
Objectives. We investigated, in vitro, the CD86 presence on human EC lines, both resting or activated with different immune/inflammatory stimuli (γIFN, IL-17, IL-1β).
Methods. Human Umbilical Vein Endothelial Cells (HUVEC, Lonza, Switzerland) and Human Microvascular Endothelial Cardiac Cells (HMVEC-C, Lonza, Switzerland), were stimulated for 48 hours with γIFN (500 U/ml, Sigma, Milan, Italy) in order to activate them (3). In addition, HMVEC-C were stimulated for 48 hours with human IL-1β (500 U/ml, Adipogen, Incheon, South Korea) or IL-17 (100 ng/ml, Biovision, CA, USA). Thus, the expression of the EC phenotypic markers CD31 and CD105 in resting ECs, and the expression of CD86 in resting or activated ECs were detected by FACS. In every experiment specific isotype control was included.
Results. The phenotypic CD31 and CD105 specific staining of the ECs was confirmed by FACS analysis. CD31 and CD105 markers were found in respectively 99% and 96% of the unstimulated HUVEC, as well as in 93% and 96% of the unstimulated HMVEC-C.
ECs in resting condition, expressed mild level of CD86 (57% on HUVEC; 60% on HMVEC-C) at 48 hours. The same ECs after 48 hours of γIFN stimulation, showed an evident increase of the fluorescence for CD86 expression (85% on HUVEC; 68% on HMVEC-C).
Further evaluations limited to HMVEC-C, showed that IL-1β stimulation did not change the percentage of CD86 positive cells (61%) after 48 hours, compared with untreated cells (60%). Conversely, IL-17 treatment induced a light increase of CD86 positive cells (71%) after 48 hours, compared to untreated cells (60%).
Conclusions. Our study shows that ECs (both HUVEC and HMVEC) express constitutively the co-stimulatory molecule CD86, and the expression is increased in activated state. In particular, microvascular ECs activated with γIFN and IL-17, but not with IL-1β, show an increased CD86 expression compared to their resting condition. These results suggest the probably involvement and contribution of ECs during the immune/inflammatory response.
References
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Keywords. Endothelial cells, co-stimulatory molecules, CD86.

P-002

Endothelin-1 and transforming growth factor-β1 induce a pro-fibrotic phenotype in cultured human dermal microvascular endothelial cells

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Background. Endothelial cell activation and dysfunction contribute to vascular damage, which represents an early event in fibrotic diseases, including systemic sclerosis (SSc) (1,2). These activated cells secrete pro-fibrotic mediators such as endothelin-1 (ET-1) and transforming growth factor-β1 (TGFβ1), which can directly induce myofibroblast activation and their overproduction of extracellular matrix macromolecules during fibrosis (3, 4).
Objectives. The study investigated the effects of ET-1 and TGFβ1 in inducing the overexpression of pro-fibrotic molecules, α-smooth muscle actin (α-SMA), fibroblast specific protein-1 (S100A4) and fibronectin (FN) in cultured human dermal microvascular endothelial cells (HMVECs).
Methods. HMVECs (Lonza Clonetic, Switzerland) at 4th culture passage were treated with ET-1 (100nM) or TGFβ1 (10ng/ml) (Enzo LifeScience, UK) for 6 days in EGM-2 growth medium (Lonza Clonetic). Untreated cells were used as controls. Expressions of α-SMA, S100A4 and FN were investigated by quantitative real time polymerase chain reaction (qRT-PCR). The synthesis of these proteins was evaluated by immunofluorescence and immunocytochemistry, using primary antibodies to human α-SMA, S100A4 (Dako Cytomation, Denmark) and FN (Sigma Aldrich, Italy) (dilution 1:100 for all). Gene expression of platelet endothelial cell adhesion molecule (PECAM-1 or CD31), as endothelial phenotype marker, was evaluated by qRT-PCR, whereas its protein expression was investigated flow cytometry, using primary antibody anti-human CD31-phycoerythrin conjugated (Miltenji Biotec, Germany). Statistical analysis was performed by non-parametric test.
Results. In HMVECs, ET-1 and TGFβ1 significantly up-regulated the expression of α-SMA, S100A4 ($p<0.01$) and FN ($p=0.01$; $p=0.04$) compared to untreated cells, as observed by qRT-PCR. Results were confirmed by immunofluorescence and immunocytochemistry. No significant modulatory effects on CD31 expression were induced by ET-1 and TGFβ1 vs. untreated HMVECs, as showed by qRT-PCR and flow cytometry.
Conclusions. Preliminary results seem to suggest a possible action of ET-1 and TGFβ1 on endothelial cells leading their activation and production of a pro-fibrotic environment, which might characterise the early phase of the fibrotic process.
References
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Keywords. Endothelin-1, transforming growth factor-β1, endothelial cells, fibrosis

P-003

Physiological Mechanism Underlying Beneficial Neuromuscular Effects of Whole-Body Vibration: Is it Tonic Vibration Reflex ?

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Background. Muscle weakness and atrophy are common problems in rheumatic diseases. Whole-body vibration (WBV), as a method of exercise training, is becoming increasingly popular in physical therapy, rehabilitation, and professional sports due to its beneficial effects on the neuromusculoskeletal system. These benefits include the enhancement or improvement of strength and power of muscles, or at least the prevention of loss of strength and power of muscles. Two different mechanisms, tonic vibration reflex and bone myoregulation reflex, have been suggested as the physiological mechanism underlying the beneficial effects. However, the exact physiological mechanism remains unclear. If tonic vibration reflex, an analogue of the T-reflex, is the physiological mechanism, when T-reflex is studied during WBV, T-reflex amplitude should decrease during WBV (occlusion phenomenon). We hypothesize that T-reflex amplitude decreases during WBV.
Objectives. Aim of this study was to test our hypothesis.
Methods. Fourteen healthy young adult males were included in this study. All volunteers gave written informed consent to the experimental procedures, which were in accordance with the Declaration of Helsinki and were approved by the local ethics committee. WBV at 25, 30, 35, 40, 45, 50 Hz were applied. Each vibration session lasted for 6 seconds and there was a rest of 3 seconds in between vibration sessions. Surface electrodes were placed on the right soleus muscle. Soleus T-reflex recordings were elicited by using surface EMG before and during WBV. Participants stood upright with their knees locked on the vibration platform during all recordings.
Results. The mean amplitude of soleus T-reflex was 202.4±98.6 microvolts and 89.4±46.6 microvolts before and during WBV, respectively. It significantly decreased during WBV ($p=0.015$) (Fig. 1).
Conclusions: The results of this study confirms our hypothesis. This study showed that the beneficial effects of WBV cannot be explained with tonic vibration reflex.
Keywords. Exercise, muscle strength, electromyography, myoelectrical activity, vibration, rheumatic disease

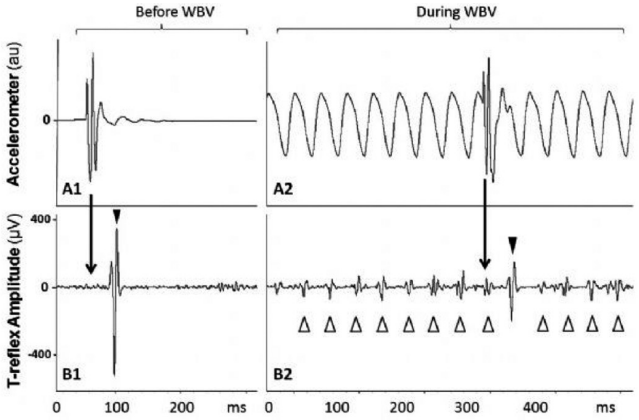

Fig 1. Amplitude of T-reflex response before and during WBV. The upper traces (A1 and A2) show recordings of mechanical stimuli. The lower traces (B1 and B2) show recordings of surface EMG. Arrows indicate the onset of the tap stimulus of reflex hammer. Solid arrowheads indicate T-reflex response on surface EMG traces. Other EMG spikes (open arrowheads) on the B2 trace was induced by WBV.

P-005

Activation of NFkβ Pathways in Sjögren's Syndrome Related Lymphomagenes

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Background/Objectives. Sjögren Syndrome (SS) bears the highest risk for lymphoma development among all autoimmune diseases. Chromosomal translocations and mutations of p53, B-cell activating factor (BAFF) receptor and recently TNFAIP3 have been shown to contribute to SS-related lymphomagenesis. NFκB is the target of all these genomic aberrations. To this end, a growing body of evidence suggests activation of NFκB pathways as a critical step in the pathogenesis of both SS and B-cell hematological malignancies including non-Hodgkin's B-cell lymphomas, the major type of SS-related lymphomas. The aim of the current study is to evaluate the contribution of NFκB pathways activation in SS related lymphomagenesis.
Methods. Quantitative expression of both NFκB1 and NFκB2 mRNA transcripts were measured by real-time PCR in whole blood and minor Salivary Gland (MSG) tissues derived from SS patients with or without lymphoma and controls (31 SS, 13 SS-lymphoma, 30 HC). SS non lymphoma patients were further stratified as high or low risk for lymphoma development according to the criteria published by Ioannidis *et al*. (24 low risk-7 high risk). NFκB1 and NFκB2 mRNA transcripts were also measured in isolated B cells from 2 SS, 6 SS-lymphoma patients and 5 HC.
Results. NFκB2 transcripts were significantly upregulated in the whole peripheral blood, MSG tissues and isolated B cells derived from SS patients complicated by lymphoma, compared to healthy controls (p<0.05). NFκB1 transcripts were found downregulated in peripheral blood of SS lymphoma patients compared to high risk patients and HC (p<0.005). An opposite pattern was observed in MSG of SS patients complicated by lymphoma since a significantly increased expression of NFκB1 transcripts was detected compared to the sicca control group (p<0.05). Of interest NFκB2/ NFκB1 ratio was significantly increased in the peripheral blood from SS patients complicated by lymphoma compared to both low risk SS patients and HC (p<0.001) indicating a possible discriminatory ability in the diagnosis of lymphoma.
Conclusion. Our data imply activation of the non-canonical NFκB pathway -as expressed by predominant increase of NFκB2 transcript levels in both periphery and at the site of tissue injury- as a significant contributor in SS-associated lymphomagenesis.
Keywords. NFkβ, Sjögren's syndrome, Lymphomagenesis.

P-006

Lack of Association between IL-6 gene polymorphisms and Severity and Age Onset of Rheumatoid Arthritis

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Background. Rheumatoid arthritis (RA) is a complex, autoimmune genetic disorder characterized by chronic inflammation and cellular proliferation in synovial of joints leading cartilage and bone destruction. Inflammatory cytokines such as IL-1, TNF-α and IL-6 are produced at elevated levels in patients with RA. Previously, we did not find relationship between IL-6 polymorphisms (-174, -572 and -597) and RA but we thought these polymorphisms may affect severity and age onset of RA.
Objective. The aim of this study was to determine the association between IL-6 polymorphisms and severity and age onset of RA in Turkish population.
Methods. A total of 426 subjects were recruited into the study (248 healthy controls (HC) and 178 RA). The promoter region of IL-6 gene was amplified by PCR using DNAs from patients and controls and their PCR products were digested by suitable enzymes. Then the variations in 174, 572, and -597 region of IL-6 were determined.
Results. Patients with severe RA are 55 (male (%16,4) and female (%83,6)) and patients with milder RA are 123 (male (%16,3) and female (% 83,7). Any significant difference was not found between IL-6 genotype distribution for -174, -572, -597 positions between severe and milder RA groups respectively (p=0,426, p=0,582, p=0,277). Also, we cannot see any difference between allele frequencies of IL-6 for -174, -572, -597 positions in the promoter region between severe and milder RA groups respectively (p=0,297, p=0,985, p=0,084). Furthermore, any significant relationship was not found between IL-6 genotype distributions (-174, -572, -597) and age onset respectively (p=0,114, p=0,068, p=0,403). Additionally, we couldn't find any association between age of RA disease on set and IL-6 gene polymorphisms either in severe RA group or not severe RA groups respectively.
Conclusions. Any significant association was not found genotype distributions or allele frequency of IL-6 with severe and milder RA patients but IL-6 -597 A allele is almost close to significant point (p:0,084) and increased in milder RA patients in Turkish population.
Keywords. Polymorphism, RA, IL-6.

P-007

2 Cases of Adverse Reaction to Metal Debris from Metal on Polyethylene Hips with Elevated Cobalt Levels

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P-008

Pseudothrombocytopenia Following Treatment with Cyclophosphamide in Lupus Nephritis

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P-009

Primary Amyloidosis Mimicing Systemic Sclerosis

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P-010

Normotensive Scleroderma Renal Crysis

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P-011

"The Limping Enigma"- A Case of Churg-Strauss Syndrome Presenting with Foot Drop

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P-012

A Rare Case of Tuberculous Arthritis of the Ankle in a Seronegative Rheumatoid Arthritis in Philippine Patient

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P-013

A Complication Secondary to Antithyroid Drug Use: Antineutrophil Cytoplasmic Antibody Positivity and Diffuse Alveolar Haemorrhage

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P-014

Coexistence of Systemic Lupus Erythematosus and Familial Mediterranean Fever

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P-015

Treatment-Resistant Complex Regional Pain Syndrome

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P-016

Systemic Lupus Erythematosus - An atypical presentation

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P-017

A Case of Primary Sjögren's Syndrome Admitted with Autoimmune Hepatitis

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P-018

A Case of Leukocytoclastic Vasculitis Applied with Ischemic Jejunitis

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P-019

Interferon Induced Digital Gangrene in Hypereosinophilic Syndrome: Case Report

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P-020

Septum Perforation in a Patient with Psoriatic Arthritis: A Case Report

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P-021

Advanced Multifocal Aseptic Osteonecrosis: a Case Report

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P-022

Accelerated Steroid-Induced Multifocal Osteonecrosis in a Patient with Myasthenia Gravis: A Case Report

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P-023

Outcome of Rituximab Treatment in Overlap Syndrome (Systemic Sclerosis, Rheumatoid Arthritis And Sjögren): A Case Report

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P-024

Osgood Schlatter Disease with Late Onset

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P-025

Takayasu's Arteritis Associated with Tuberculosis in Two Patients

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P-026

Somatoform Disorder Mimicking Severe Neck Pain in a Patient with Ankylosing Spondylitis: A Case Report

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P-027

Behind Appearances: Elevated Seric Creatine Kinase

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P-028

A Giant Enchondroma Mimicing Sarcoidosis

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P-029

Sarcoid-Like Granulomatosis Developing During Anti-TNF Therapy: Unexpected or Expected Side Effect? A Case Report and Review of the Literature

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P-030

Paget-vonSchroetter Syndrome associated with Thrombophilia and Thoracic Outlet Syndrome: A rare case report

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P-031

Ichthyosis Vulgaris Coexisting with Rheumatoid Arthritis

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P-032

A Rare Complication of Tuberculosis: Acute Paraplegia

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P-033

"SAPHO Syndrome": A Patient with Neck and Back Pain

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P-034

Kikuchi's Disease and Systemic Lupus Erythematosus: Mysterious Co-occurrence

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P-035

Coexistence of Behçet's Disease and Villonodular Synovitis Mimicking Meniscopathy

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P-036

Coexistence of Familial Mediterranean Fever, Behçet's Disease and Sacroiliitis

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P-037

A Novel TNFRSF1A Mutation in a Patient with Periodic Fever Syndrome

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P-038

Rheumatoid Arthritis and Tetraplegia: A Case Report and Review of the Literature

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P-039

Union of Rheumatoid Arthritis with Lead Neuropathy

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P-040

Neuropsychiatric Systemic Lupus Erythematosus: A Case Report and Review of the Literature

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P-041

Universal Calcinosis Dystrophic and Disabling: A Rare Complication of Dermatomyositis in Adult

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P-042

Similarities in Genetic Background with Different Clinical Pattern in Systemic Lupus Erythematosus Siblings - A Case Report

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P-043

Rheumatoid Arthritis and Chronic Lymphocytic Leukemia with Monoclonal Gammopathy Treated with Rituximab (Case Report)

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P-044

A Case of Neurosarcoidosis with Aggressive Characteristics

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P-045

Hyperhomoscysteinemia and Knee Pain: A Case Report

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Malignant Transformation in an Ollier's Disease Case

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Occurrence of Erythema Nodosum after Anti TNF Blockers

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Renal Failure in a Long Standing Ankylosing Spondylitis Patient

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Pyoderma Gangrenosum, One Lesion, Two Disease Associations

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Trigger Finger in a Mother and Three Daughters

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Episcleritis with a Positive Result for Anti-CCP Antibodies as the Clinical Presentation of Reactive Arthritis

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Recurrent Salmonella Bacteremia in a Systemic Lupus Erythematosus Patient

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Systemic Lupus Erythematosus Presenting with Kikuchi-Fujimoto Disease

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An Atypical Case of Paget's Disease in a Young Woman

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Coexistence of Nail-Patella Syndrome and Ankylosing Spondylitis

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Septic Osteoarthritis Masked by a Complex Regional Pain Syndrome

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Sweet's Syndrome Following Rheumatoid Arthritis Treatment with Focal Leucocytoclastic Vasculitis: A Case Report

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Acute Critical Upper Limb Ischemia, a Rare Presentation of Giant Cell Arteritis

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P-060

Multiorgan Systemic Tuberculosis Reactivation after Biologic Treatment in a Patient with Negative Tuberculosis Screening

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Digital Ulcers as First Disease Maniphestation in Systemic Lupus Erythematous - Evolution and Complications of the Treatment

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P-062

Acute Critical Upper Limb Ischemia, a Rare Presentation of Giant Cell Arteritis

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P-063

The Role of Monitoring Drug Level and Anti-Drug Antibodies During the Treatment of Ankylosing Spondylitis Patients with Biologics

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P-064

Influence Of A1298C Mutation of Methylenetetrahydrofolate Reductase on Efficacy and Safety of Methotrexate in Patients with Rheumatoid Arthritis

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Background. Methylenetetrahidrofolate reductase (MTHFR) is critical enzyme for regeneration tetrahidrofolate which are necessary for different metabolic pathways. Polymorphisms of the MTHFR gene can influence the Methotrexate (MTX) pharmacodynamic related to drug-induced toxicity and drug efficacy in patients (pts) with rheumatoid arthritis (RA).
Objective. To study the possible relationship between the A1298C mutation of the MTHFR gene and the efficacy and toxicity of treatment MTX in pts with RA.
Methods. Genotype analyses of MTHFR gene was done in 100 pts with RA diagnosed according to the American College of Rheumatology (ACR) criteria. The mean age of the pts was 57,8±10,3yrs, mean disease duration was 4,11±2,6yrs and the mean treatment duration with previous DMARDs was 3,02±2,7 yrs. The pts were taking low-dose MTX (7,5-20mg/week) with (47pts) or without (53pts) folic acid supplementation,69pts were treated with corticosteroids, up to 10mg/day. Clinical efficacy was assessed using the Disease Activity Score in 28joints (DAS 28) at day 0 (DAS28 0) and 6month after initiation of MTX therapy (DAS28 1). Relative DAS (rDAS) for each patient was calculated according to the following formula: rDAS28 = DAS28 0 – DAS28 1/DAS28 0. Drug toxicity was evaluated by blood count, elevation of liver enzymes, presence of nausea, stomatitis and hair loss. Genotype analysis of the MTHFR gene was investigated by polymerase chain reaction (PCR) and restriction enzyme analysis of DNA extracted from the patients white blood cells. Statistical analyze was performed using SPSS version 11.5 (T test, ANOVA, Fischer test).
Results. The distribution of the A1298C alleles AA, AC and CC was 45%, 46% and 9% respectively. Efficacy parameters (relative DAS 28) were significantly different between the patients with (AC/CC) and those without (AA) the mutation A1298C (T test, $p<0,05$). The cumulative doses of MTX were significantly lower in pts with AC/CC mutation A 1298C gene (ANOVA, $p<0,05$). Different related toxicity were identified: 15 pts had nausea (10pts mild, 5pts moderate), 7pts hair loss, 9pts elevated transaminases, 7 pts had leukopenia, 5pts had thrombocytopenia, one patient had stomatitis. The frequency of toxicity events were not significantly different between the patients with/without mutation MTHFR gene (Fischer test, $p<0,05$).
Conclusion. Our findings suggest that A1298C polymorphism of MTHFR gene may be predictor of MTX efficacy in pts with RA and can be used for adjusting MTX dosage. The presence of this polymorphism is not association with MTX toxicity.
Keywords. Polymorphism of gene, methotrexate, rheumatoid arthritis.

P-065

Relation Between Serum IL-17 Level and Risk of Osteoporotic Fracture in Premenopausal Rheumatoid Arthritis Women: Clinical, Radiological and Laboratory Study

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Introduction. Rheumatoid arthritis (RA) is the most common form of inflammatory arthritis in adults and is characterized by chronic, progressive, systemic inflammation. It is well accepted that patients with RA are at an increased risk of osteoporosis and osteoporotic fracture.Interleukin-17 (IL-17) is a cytokine that expressed in inflammatory and autoimmune diseases and expected to play an important role in the pathogenesis of RA and osteoporosis.
Aim of the work. The aim of the study was to study the relation between serum IL-17 level and risk of osteoporotic fractures (hip and vertebral) in pre-menopausal RA patients.
Subjects. The study included 25 (RA) patients aged (38.84±7.63) years and 20 healthy subjects aged (38.71±7.24) years.
Methods. Assessment of serum IL-17 was done by ELISA, disease activity by the disease activity score 28 (DAS28), functional disability by the health assessment questionnaire-disability index (HAQ-DI), bone mineral density (BMD) by using DEXA scan, C-reactive protein by nephelometer assay, the erythrocyte sedimentation rate (ESR) by the standard Westergren method and fracture risk by

FRAX index which includes (10 years probability of major osteoporotic fractures and hip fracture).
Results. The serum IL-17 level among RA patients was (5.99 ± 1.22pg/ml) and it was significantly higher than healthy control (3.73±2.15pg/ml, $p<0.001$). Serum IL-17 levels showed a positive correlation with the FRAX index of RA patients. Serum IL-17 didn't correlate to disease activity nor functional disability.
Conclusion. Serum IL-17 was increased among (RA) patients. It correlated with FRAX index and didn't correlate to disease activity nor functional disability.
Keywords. Rheumatoid arthritis, serum IL-17, osteoporotic fracture, FRAX index.

P-066

Prevalence of Comorbidities in Rheumatoid Arthritis: An Algerian Cohort Study

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Background. Rheumatoid arthritis (RA) is a chronic, disabling autoimmune disease. Several comorbidities may occur during the progression of the disease. Unfortunately, comorbidities are not well managed in RA patients. It is very important to raise awareness of the comorbidities linked to RA so patients have the ability to manage the risk factors more effectively.
Objectives. To evaluate the prevalence of comorbidities in RA patients
Methods. cross-sectional Study. Consecutive patients with RA were enrolled. They all fulfilled the 1987 American College of Rheumatology (ACR) revised criteria. All patients were evaluated according to a standardized data collection form, including demographic variables, comorbidities and disease characteristics (Disease activity, severity, Treatment).
Results. Four hundred patients were analyzed. Female gender, 82% (F/H ratio: 4/1). The mean age was 48.45±14 years; the mean disease duration was 10.5±9.5 years. DAS28 (Disease Activity Score using 28 joints)–erythrocyte sedimentation rate, 4.5±1.3 (mean ± SD); Health Assessment Questionnaire, 1.1±0.9 (mean ± SD); Radiographic damage was present in 68.6% with a median (Q1-Q3) Sharp total score of 30 [4-120]. Extra-articular manifestations were reported in 23.7%. Disease modifying antirheumatic drugs (DMARDs) and Corticosteroids were prescribed for 83.7% and 88%. Comorbidities were observed in 36.4% of cases. The most frequently associated diseases were: cardiovascular events (Arterial high blood pressure, myocardial infarction, and stroke), 6%; Diabetes, 10%; osteoporosis, 30%.
Conclusion. Our study shows that the age of patients is relatively young and many of them have not been treated appropriately. Better identification, understanding, and management of RA comorbidities have great potential to improve quality of life and survival among our patients with RA.
Keywords. Rheumatoid arthritis, co-morbidity, cardiovascular disease.

P-067

Hypothyroidism and Autoimmune Thyroid Disorders in Rheumatoid Arthritis: Relationship with disease activity

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Thyroid function abnormalities and thyroid autoantibodies have previously been described in rheumatoid arthritis with limited data. The aim of this study was to determine the frequency of hypothyroidism and to investigate the relationship between thyroid hormone levels, autoantibodies, and disease activity in a group of patients with rheumatoid arthritis. A hundred and eight patients with a diagnosis of RA were recruited from outpatient clinics of rheumatology unit. The demographic variables comprising age, gender, disease duration were recorded. The thyroid hormone levels and antithyroid antibodies comprising antithyroglobuline antibodies-TgAb, thyroperoxidase enzyme antibodies (TPOAb)were evaluated in all patients. Subclinical hypothyroidism was defined as a measured TSH level greater than normal, with a normal free T4 and T3. Disease activity markers including DAS 28, ESR, CRP and pain levels by VAS, were recorded. The relationship between thyroid hormone levels and thyroid antibodies and disease activity parameters were determined. Eighty-six female and 12 male RA patients with a mean age of 54.3+11.5 years and with a mean duration of 11.51+9.17 years were included to the study. 10(9.2%) of the patients had hypothyroidism and 70 (64.2 %)had positive antithyroglobuline antibodies. There was a relationship between the hypothyroid disease is not frequent but autoimmune thyroid disease is common in patients with RA, which may be related with disease activity. Future studies are needed to highlight the possibility of common pathogenic mechanisms among them.
Keywords. Autoimmune thyroid disease, Rheumatoid Arthritis, thyroid antibodies.

P-068

Prevalence of Comorbidities in Patients with Rheumatoid Arthritis

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Introduction. The comorbidities are disorders associated with rheumatoid arthritis RA. The mechanisms of these associations can be linked to the RA itself, to the effects of the treatments used to improve, or the prerogative of the simple coincidence, their presence are the severity of the disease (functional impairment and quality of life), but also increased the mortality of the RA. Several studies had shown a high prevalence of comorbidities in patients with RA, on the other hand few data are known in our population, of this fact we have tried to study the number and characteristics of these associations among our patients with PR
Objectives. To evaluate the prevalence and types of comorbidities in RA patients from Algeria.
Methods. We have collected information on patients with a RA treaties in rheumatology, including the demographic data, the salaries received in report with the RA, the comorbidities related to the disease and to these treatments, from the records of patients followed at the level of the service of rheumatology - Hospital Ben Aknoun, Algiers. The comorbidities that were considered were primarily cardiovascular, endocrine, pulmonary, bone, liver, haematological and neoplasic. The descriptive statistics were conducted on SPSS 20.0.
Results.
The data from 114 patients with a RA were included in the analysis, age of beginning average 42.6±16.5 years. The majority of the patients were treated with DMARDs (92.1%), whereas 24.6% received biotherapy, either as monotherapy or in combination with DMARDs. The comorbidities have been reported in 94 patients (82.5%), with an average of 2.2 comorbidities per patient. The co-morbidities the most frequent were the chronic pulmonary, hypertension (HTA), anemia and osteoporosis (respectively 28.1%, 26.3%, 26.3% and 24.6% of the patients). The advanced age ($r=0.268$, $p=0.05$) was the only factor associated with the presence of co-morbidities.
Conclusions. The comorbidities were frequent in our study, involving 4 patients on 5. There was no demographic factor or linked to the illness which could be associated with a higher prevalence of comorbidities. The systematic search for comorbidities as well as their treatment are necessary in order to complete the support for this pathology
Keywords. Rheumatoid arthritis, comorbidities, chronic pulmonary.

P-069

Comparison of the Count of Tender and Swollen Joints by Self-Assessment and Assessment by a Physician in Patients with Rheumatoid Arthritis – Results from a Single Tertiary Care Centre in Croatia

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Background. Systematic assessment of swelling and tenderness in joints has become a standard measure of disease activity and therefore joint counts are included in generally accepted composite measures of disease activity in rheumatoid arthritis (RA). Self-reported outcomes have become central to the measurement of response to treatment both in clinical trials and in the routine practice.
Objectives. The aim of our study was to evaluate whether patients with RA can reliably report on joint tenderness and swelling and to correlate it with the assessment performed by a trained physician.
Methods. Consecutive patients with established diagnosis of RA (n= 82; 73 women, 9 men) from the University Department were asked to assess their number of swollen and tender joints and the same was performed by a trained physi-

cian. A 28 standard joint set (shoulder, elbow, wrist, MCP, PIP, knee; on both sides) was used with a help of visual presentation (mannequin). Following data were also obtained: age, gender, education level, Patient's Global Assessment (PtGA), Physician's Global Assessment (PhGA), CRP, level of pain (on 100mm horizontal VAS), duration of morning stiffness (in minutes), Disease Activity Score 28 (DAS 28), Health Assessment Questionnaire (HAQ). Correlation with different variables was determined by Pearson's correlation. The relationship between assessment of number of tender and swollen joints (dependent variables) and indicators of disease activity was determined separately for physician's and patients' assessments, by ANCOVA.
Results. There was a significant positive correlation between the number of tender joints determined by patients and physician ($p<0.001$) and also between the number of swollen joints determined by patients and physician ($p<0.001$). Significant correlation was also found between the number of tender and swollen joints, determined either by physician or a patient, and DAS ($p<0.001$) and level of pain ($p<0.001$ tender joints; $p=0.03$ swollen joints). We also analyzed which indicators of disease activity were related to physician's and patients' assessment of tender and swollen joints. When controlled for age, gender and patients' level of education, morning stiffness was the only significant factor related to the number of tender and swollen joints determined by a physician.
Conclusions. In our sample of patients with RA self-assessment of number of swollen and tender joints was in concordance with the count done by a trained physician. Morning stiffness, DAS and level of pain were significantly associated with the number of swollen and tender joints. Self-report tender and swollen joint count should be considered as a valuable and reliable alternative in assessing the disease activity in RA.
Keywords. Assessment, count, joint, patient, physician, rheumatoid arthritis, self, swollen, tender.

P-070

Physiotherapy and Climatotherapy for the Patients Suffering Psoriatic Arthritis in Institute "Dr Simo Milosevic" Igalo-Montenegro

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Background. Psoriatic arthritis (PsA) is a type of arthritic inflammation that occurs in about 15 percent of patients who have a skin rash called psoriasis. Physiotherapy and climatotherapy are widely accepted part of non-pharmacological treatment of patients with PsA.
Objective. to investigate the sustained effect of rehabilitation programme and climatotherapy for PsA patients in Institute "Dr Simo Milosevic" Igalo.
Methods. A total of 172 PsA patients applying for rehabilitation in Institute Igalo and were randomized to a 4-week in-patients rehabilitation program. PsA patients were grouped into three groups depending on the season: (I) spring (from 07.05. to 28.05.2013., average values for temperature was 18.9°C, for sunny days 5 and for humidity 74%; n=57), (II) summer (from 02.07. to 29.07.2013., average values for temperature was 26.9°C, for sunny days 22 and for humidity 56%; n=52) and (III) fall (from 24.09. to 22.10.2013., average values for temperature was 21°C, for sunny days 16 and for humidity 71%; n=63) group. The participants were evaluated clinically before and after rehabilitation period (week 0 and 4). The treatment response were measured by using MHAQ, DAS28 and ACR response. Analyzed groups did not differ by age, sex ratio and the presence of biological agents in the treatment of PsA.
Results. In all analyzed groups significantly reduces MHAQ (I-$p<0.05$; II-$p<0.05$ and III $p<0.05$) and DAS28 (I-$p<0.05$; II-$p<0.04$ and III $p<0.05$). The average value of the ACR response was not significantly different among analyzed groups. Achieved ACR response in the groups was: I-no response 17.54%, ACR20 31.58%, ACR50 33.33%; II-no response 13.46%, ACR20 48.08%, ACR50 38.46%; III-no response 6.35%, ACR20 60.31%, ACR50 33.33%. Fall patients group had significantly fewer patients with no ACR response ($p<0.03$).
Conclusion. Physiotherapy and climatotherapy through their synergistic action significantly improved diseases control in PsA. According to our results the best effect had physiotherapy in the early autumn month.
Keywords. Psoriatic arthritis, physiotherapy, climatotherapy, season.

P-071

Rheumatoid Arthritis-Associated Interstitial Lung Disease: Radiologic and Clinical Characteristics

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Interstitial lung disease (ILD) is a common extra-articular manifestation of rheumatoid arthritis (RA), and a significant cause of morbidity and mortality in this patient population (1). Using high-resolution computed tomography (HRCT) scanning, the estimated prevalence of RA associated ILD (RA-ILD) among patients with RA is 19–56% (2-5). The study was planned to investigate the pulmonary involvement in patients with rheumatoid arthritis and to assess the relationship between clinical characteristics, laboratory findings and lung involvement. We included 63 patients; 50 (79%) females, 13 (21%) males with a mean age of 50.2 years and mean duration of disease was 102 months. Seventeen patients (27%) had at least one pulmonary symptom. Chest x-ray, pulmonary function test (PFT) and high resolution computerized tomography (HRCT) were abnormal in 16 (25.4%), 22 (36.6%) and 38 (60.3%) patients with RA, respectively. The most frequent abnormalities obtained on HRCT were pulmonary nodule (n=20, 31.7%), bronchiectasis (n=16, 25.4%) and ground-glass densities (n=11, 17.5%). We found no relations between duration of disease, age, gender, disease activity parameters and pulmonary involvement in RA patients. According to logistic regression analysis abnormal chest x-ray (OR:26.30; 95% CI:0-463.7), decrease in diffusing capacity for carbon monoxide (DLCO) (OR:15.35; 95% CI:0.488-14.098), having pulmonary symptom (OR:8.36; 95% CI: 1.124-62.27) and exist of small airways disease in PFT (OR:7.61; 95% CI:1.039-55.84) were the risk factors for pulmonary involvement in HRCT
In conclusion, we found a high frequency of pulmonary involvement in RA patients (60%). The clinical findings and pulmonary function tests were useful to evaluate and monitoring the pulmonary involvement in RA patients. However HRCT was necessary especially if there was a risk factor.

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Keywords. Rheumatoid arthritis, interstitial lung disease, high-resolution computed tomography.

P-072

A Good Prognostic Marker in Seronegative Rheumatoid Arthritis: Anti-RA 33

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Background. Rheumatoid arthritis (RA) is a systematic autoimmunological disease characterized by inflammatory polyarthritis and autoantibody positivity(1). Although not especially sensitive or specific for RA when used in isolation, an algorithm involving anti-RA 33, RF, and anti–citrullinated protein antibody (anti-CCP) can be used to predict patients with early synovitis who will progress to erosive RA (2).
Objectives. In our study, the aim is to investigate Anti-RA 33 positivity in patients diagnosed with RA and the clinical characteristics of these patients in accordance with Rheumatoid Factor (RF) negative and Anti–citrullinated protein antibody (Anti-CCP) negative American College of Rheumatology/European League Against Rheumatism (ACR/EULAR) 2010 criteria.
Methods. We included 67 RF(-) Anti-CCP(-) RA patients in the study. Within the clinical research, the patients' duration of symptoms, their duration of disease,

their delay duration in diagnosis, the existence of clinical remission, the relevant disease-modifying antirheumatic drugs (DMARDs) amount, the existence of family history were asked. Quality of life was evaluated with the Health assessment questionnaire (HAQ) and the scores were calculated. The remission scores were calculated using the ACR/EULAR 2011 remission criteria. The laboratory assessments included erythrocyte sedimentation rate (ESR), C-reactive protein (CRP) level, and serologic assessments for RF, anti-CCP and anti-RA 33.
Results. The mean disease duration was 42.6 months. The Anti-RA 33 antibodies were regarded as positive in 56.7% of the patients. 63% of the cases which had positive Anti-RA 33, were clinically in remission. A statistically significant but weak correlation was observed between the positivity of Anti-RA 33 and clinical remission (p=0.02, r=0.284). A strong, negative correlation was found between the Anti-RA 33 positivity and the DMARDs amount (p<0.000, r=-0,766). A statistically significant, strong and negative correlation was found in Anti-RA 33 positivity and HAQ scores (p=0.000, r=-0.737).
Conclusions. In seronegative RA patients, Anti-RA 33 antibodies may have helpful effects in solving problems while making a clinical diagnosis and determining a prognosis. New studies must be designed for evaluating Anti-RA 33 in seropositive cases, and adjusting sensitivity and specificity of a test.
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Keywords. Rheumatoid arthritis, prognostic factor, anti RA 33.

P-073

Safety of 23-Valent Pneumococcal Vaccine in Rheumatoid Arthritis Patients

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Background. Comorbid infections have significant impact on morbidity and mortality, especially in autoimmune rheumatic diseases. Therefore, prevention of infection is an integral part of supervision of these patients.
Objectives. Safety study of 23-valent pneumococcal vaccine for patients with rheumatoid arthritis (RA), receiving therapy with disease modifying anti rheumatic drugs (DMARDs), and biological disease-modifying antirheumatic drugs (bDMARDs).
Methods. The research included 96 people (women – 74, men - 22, at the age of 20 to 77 years), including 54 RA patients and 42 control subjects with a history of near >= 2 cases of lower respiratory tract infections (bronchitis, pneumonia). 24 patients with RA receiving methotrexate(MTX), 6 – leflunomide, 24 - tumor necrosis factor alpha (TNF-α) + MTX. 23-valent pneumococcal vaccine at 1 dose (0.5 ml) were injected subcutaneous continued MTX / leflunomide or 28-30 days before use TNF-α. Length of observation period after vaccination was 12 months.
Results. In 63 cases (66% of observations) patients tolerated the vaccine without complications. In 27 cases (28%) pain, swelling and redness of the skin with a diameter of 2 cm was observed. In 6 cases (6%) the injection of vaccine resulted in low-grade fever. These reactions were not associated with the on-going antirheumatic therapy and they did not require changes in the treatment scheme. These reactions were fully resolved within 24 hours without additional treatment. Clinical and radiographic signs of pneumonia were not observed in any of the cases. Episodes of exacerbation of RA or the occurrence of any new autoimmune disorders during follow-up were not observed as well.
Conclusion. Thus, preliminary results indicate sufficient clinical efficacy and good tolerability of the 23-valent pneumococcal vaccine for the patients with RA. For a more complete assessment of the effectiveness and safety of vaccine further clinical studies are recommended.
Keywords. Vaccination, rheumatoid arthritis, pneumonia.

P-074

Clinical and Functional Characteristics of Rheumatoid Arthritis in Algerian Patients

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Objectives. The aim of this study was to describe the demographic, clinical and functional characteristics of rheumatoid arthritis (RA) patients seen at the Douera hospital.
Methods. Consecutive patients with RA were enrolled between 2007 and 2010. They all fulfilled the 1987 American College of Rheumatology (ACR) revised criteria. All patients were evaluated according to a standardized data collection form, including demographic variables and disease history with clinical, biological, and radiological features, as well as treatment. Disease activity was measured clinically using physical examination, biologically and by the disease activity scores (DAS28). Radiographs were evaluated by using Sharp's method as modified by van der Heijde. Functional disability was measured by using Health Assessment Questionnaire (HAQ).
Results. There were 248 females and 87males (F/H ratio: 5/1). The mean age of patients was 48.45±14 Years; the mean disease duration was10.5±9.5 years. The majority of patients (85.6%) described an insidious onset; 34.4% of patients had a high activity of disease and 8.7% were in remission. Radiographic damage was present in 68.6 % with a median (Q1-Q3) Sharp total score of 30 [4-120], and the mean score of HAQ was 1.15±0.9. Extra-articular manifestations were reported in 23.7%.Comorbidity was observed in 36.4% of cases. A family history of rheumatoid arthritis was found in 16.2% of patients. Disease modifying antirheumatic drugs (DMARDs) and Corticosteroids were prescribed for 83.7% and 88%.
Conclusions. Our study shows that the age of patients is relatively young and many of them have not been treated appropriately.
However, to improve the prognosis of the disease it's essential to establish national recommendations for therapeutic management of the disease.
Keywords: Clinical and functional characteristics, rheumatoid arthritis, Algerian patients.

P-075

Impact Of HLA-DRB1 Shared Epitope Alleles According to the New Classification on the Susceptibility and Structural Severity in Algerian Patients with Rheumatoid Arthritis

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Background. Rheumatoid arthritis (RA) is a complex polygenic disease. HLA-DRB1 alleles encoding the shared epitope (SE) are associated with RA susceptibility and severity. Recently HLA-DRB1 SE alleles has been reclassified into S1, S2, S3P and S3D groups.
Objectives. Assessed the impact of this new classification of the HLA-DRB1 SE+ in RA susceptibility and structural severity.
Methods. Serum and genomic DNA samples of 154 RA patients and 95 healthy controls were obtained. HLA-DRB1genotyping and sub typing was performed by PCR- sequence specific probes (PCR-SSP). Rheumatoid factor (RF) and C-reactive protein (CRP) were quantified by nephelometry. ACPAs were detected by ELISA. Disease activity was assessed using the DAS28-VS and radiographic damage by Sharp Vander Heidje method.
Results. We found a positive association between RA susceptibility and S3P alleles (OR=2.94, 95% CI 1.82 to 4.84; p<7.10-5) and S2 alleles (OR=2.71, 95%CI 1.047 to 8.17; p<0.04). In opposite, a negative association was found for S1alleles (OR = 0.58, 95% CI 0.37 to 0.89, p<0.01) and X alleles (OR= 0.59, 95% CI 0.40 to 0.86; p<5.10-3). No significant association was observed for the S3D class of alleles (13.9 % vs 14.2%, p<0.93). Finally we didn't observe any association between the HLA-DRB1 alleles and structural severity.
Conclusions. According to the revised classification, RA susceptibility alleles in Algerian patients were S2 and S3P groups alleles but the protective alleles were S1 and X alleles. Our results support the hypothesis of a differential role played by different HLA-DRB1 allele groups in RA susceptibility and structural severity.
Keywords. HLA-DRB1 Shared epitope, rheumatoid arthritis, Algerian patients.

P-076

The Effectiveness of Galvanic Current Therapy and a Conservative Hand Exercise Program in a Rheumatoid Hand: A Randomized Controlled Trial

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Background. There is a lack of studies in literature concerning electrotherapy for the hand and hand exercise in the treatment of rheumatoid arthritis (RA).
Objective. To apply in-water galvanic current therapy to patients with the intention of decreasing rheumatoid hand pain; to apply a hand exercise program in order to increase the strength and skill of hand and to research the effectiveness of these treatments.
Method. RA patients, whose disease activity was at a moderate (on average DAS-28:3.80±0.83), were classified randomly into two groups. The study group (n=16) was treated with 1.5 mA galvanic current therapy using two water-filled cups into which the hands were placed. This treatment was applied for 20 minutes a day over a 10-day period, and the patient also started a conservative exercise program for the hand, to be applied at home twice a day for 10 days. The control group (n=14) only took part in the hand same exercise program. Swollen and tenderness joint count, patient global assessment, hand pain (visual analogue scale), health assessment questionnaire, Duruoz, evaluations, hand flexion, extension, opposition deficits, wrist dorsal and palmar flexion range of motion, hand grip strength (Jamar dynamometer), pinch strength and nine hole peg test (NHPT) measurements of patients were taken before treatment, immediately after treatment, and 3 weeks after treatment for both hands.
Results. A baseline difference occurs only in terms of hand pain, and VAS is higher in the study group (p=0.005). A comparison of the changes in results from before therapy, after therapy and at week 3 for the two groups is shown in Tables 1 and 2. A significant increase can be observed only between the first and second measurements of the grip strength of both hands in the study group (p=0.011, 0.025 respectively); and a notable increase was seen only between the first and third measurements of the left hand pinch strength (p=0.043). There was a significant increase only between the first and second measurements in right hand NHPT (p=0.016); and the differences between the first measurement and the other two measurements in the left hand NHPT were also significant (p=0.001, 0.005 respectively). The differences between the first measurement and the other two measurements in the right hand pinch test were significant (p=0.008, 0.004 respectively); and the differences between the first measurement and the other two measurements in right hand NHPT were also significant (p=0.039, 0.040 respectively).

Table I. Comparison of results of before therapy and after therapy and control in the study groups

	1. Measurement Median (mean±SD)	2. Measurement Median (mean±SD)	3.Measurement Median (mean±SD)
TJ (n)	4.00 (3.75±2.76)†¶	0.0 (1.62±2.70)	1.50 (2.37±2.87)
SJ (n)	1.00(1.31±1.44)¶	0.0 (0.56±0.96)	0.0 (1.06±1.87)
PGA (VAS=0-100 mm)	50.00 (40.62±21.12)†	35.00 (30.00±16.58)	30.00 (30.00±22.50)
HP (VAS=0-100 mm)	50.00 (47.18±18.61)†¶	35.00 (30.93±22.22)	30.00 (28.12±22.35)
HAQ	1.50 (1.32±0.69)†¶	1.10 (0.98±0.72)	1.00 (1.00±0.64)
DHI	17.50 (22.68±17.71)†¶	7.00 (14.50±16.65)	8.50 (15.50±17.37)
Deficit (cm)			
F (RH)	0.65 (2.31±5.71)	0.50 (0.70±0.79)	0.40 (0.67±0.83)
F (LH)	0.50 (0.88±0.87)†¶	0.27 (0.59±0.75)	0.27 (0.62±0.76)
E (RH)	0.00 (0.63±0.91)†¶	0.0 (0.12±0.28)	0.0 (0.15±0.35)
E (LH)	0.00 (0.46±0.86)	0.0 (0.12±0.28)	0.0 (0.15±0.39)
O (RH)	0.00 (0.20±0.48)	0.0 (0.01±0.07)	0.0 (0.10±0.26)
O (LH)	0.00 (0.18±0.47)	0.0 (0.03±0.12)	0.0 (0.06±0.17)
ROM (degree)			
WPF(RH)	50.00 (51.37±15.64)	65.00 (63.75±18.75)	70.00 (63.75±17.74)
WPF(LH)	52.50 (52.00±15.87)	70.00 (65.00±15.49)	70.00 (64.37±16.82)
WDF(RH)	45.00 (44.06±9.86)	55.00 (54.68±15.86)	57.50 (55.93±12.67)
WDF(LH)	40.00 (41.68±5.04)	55.00 (56.25±16.38)	55.00 (59.68±14.77)
GS (kg) (RH)	17.00 (17.29±4.28)†	19.15 (18.50±4.35)	18.33 (18.97±4.02)
GS (kg) (LH)	14.83 (15.00±4.76)†	16.30 (16.61±4.35)	17.83 (17.10±4.09)
PS (kg) (RH)	5.41 (5.41±1.55)†	6.00 (5.92±1.25)	6.58 (6.61±1.47)
PS (kg) (LH)	4.73 (4.86±4.61)¶	6.00 (5.64±1.52)	5.63 (5.79±1.44)
NHPT (second)(RH)	23.27 (22.80±2.59)	21.30 (20.28±5.38)	21.90 (21.71±2.76)
NHPT (second)(LH)	24.45 (24.44±3.93)†¶	21.14 (21.59± 2.31)	22.76 (22.18±2.70)

Mean ± SD: Mean ± standard deviation; TJ: Tender joint; SJ: Swollen joint; PGA: Patient global assessment; HP: Hand of pain; VAS: Visual analog scale; HAQ: Health assessment questionnaire; DHI: Duruoz Hand Index; RH: Right hand; LH: Left hand; F: Flexion; E: Extension; O: Opposition; ROM: Range of motion; WPF: Wrist palmar flexion; WDF: Wrist dorsal flexion; GS: Grip strength;PS: Pinch strength; NHPT: Nine hole peg test. †There is statistically significant difference between Measurement 1. and Measurements 3 (p<0.05) ¶There is statistically significant difference between Measurement 1. and Measurements 2 (p<0.05).

Table II. Comparison of results of before therapy, after therapy and control in the control group.

	1. Measurement Median (mean±SD)	2. Measurement Median (mean±SD)	3. Measurement Median (mean±SD)
TJ (n)	1.50 (2.07±2.55)	0.0 (1.57±2.65)	0.0 (1.35±2.53)
SJ (n)	0.50 (0.92±1.38)	0.0 (0.21±0.57)	0.0 (1.57± 0.39)
PGA (VAS=0-100)	27.50 (28.92±22.37)†	15.00 (21.42±20.23)	10.00 (17.85±17.50)
HP (VAS=0-100 mm)	22.50 (25.71±24.95)†	10.00 (20.35±26.34)	10.00 (16.78±18.35)
HAQ	1.05 (1.20±0.72)†¶	0.73 (0.85±0.61)	0.83 (0.90±0.56)
DHI	17.50 (20.78±16.36)†¶	9.50(11.64± 11.11)	10.00 (11.71±10.65)
Deficit (cm)			
F (RH)	1.00 (0.87±0.85)†¶	0.15 (0.47±0.73)	0.30 (0.49±0.68)
F (LH)	0.50 (0.72±0.72)¶	0.30 (0.41±0.49)	0.40 (0.52±0.55)
E (RH)	0.00 (0.50±0.94)	0.0 (0.21±0.46)	0.0 (0.12±0.33)
E (LH)	0.00 (0.35± 0.84)	0.0 (0.10±0.28)	0.0 (0.03±0.13)
O (RH)	0.00 (0.0±0.0)	0.00 (0.0±0.0)	0.0 (0.03±0.13)
O (LH)	0.00 (0.0±0.0)	0.00 (0.0±0.0)	0.0 (0.03±0.13)
ROM (degree)			
WPF(RH)	50.00 (52.78±14.26)	62.50 (63.50±15.58)	60.00 (60.92±15.92)
WPF(LH)	55.00 (55.85±20.46)	67.50 (64.78±17.40)	57.50 (59.92± 20.09)
WDF (RH)	42.50 (45.57±15.39)	54.00 (53.42±12.76)	55.00 (54.57± 17.80)
WDF (LH)	42.50 (47.28±20.51)	60.00 (60.92±15.82)	57.50 (56.21±19.97)
GS (kg) (RH)	18.00 (16.47±5.33)	17.33 (17.08±5.07)	20.30 (16.96±6.16)
GS (LH)	16.49 (15.85±5.82)¶	18.66 (17.81±5.59)	18.83 (16.74±6.22)
PS (RH)	5.83 (5.49±1.68)†¶	6.36 (6.32±1.26)	6.49 (6.28±1.53)
PS (LH)	5.30 (5.17±1.56)	5.83 (5.65±1.00)	6.33 (5.87±1.48)
NHPT (second)(RH)	20.63 (21.36±2.99)†¶	20.32 (20.06± 3.49)	20.35 (20.45± 3.52)
NHPT (LH)	22.43 (22.22±2.30)¶	20.02 (21.06±2.77)	21.21 (21.05±2.52

Mean ± SD: Mean ± standard deviation; TJ: Tender joint; SJ: Swollen joint; PGA: Patient global assessment; HP: Hand of pain; VAS: Visual analog scale; HAQ: Health assessment questionnaire; DHI: Duruoz Hand Index; RH: Right hand; LH: Left hand; F: Flexion; E: Extension; O: Opposition; ROM: Range of motion; WPF: Wrist palmar flexion; WDF: Wrist dorsal flexion; GS: Grip strength; PS: Pinch strength; NHPT: Nine hole peg test.

Conclusion. Post-treatment decrease in hand pain and increases in hand strength and functionality, were noted more in study group, however this effect started to decrease after 3 weeks.
Keywords. Galvanic current therapy, hand, rheumatoid arthritis

P-077

Anti-TNF Induced Autoimmunity

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Introduction. Anti-TNF therapy has recently emerged as an effective therapy for treating rheumatic diseases. With this increasing use and longer follow-up periods of treatment, various adverse effects are emerging. These adverse effects also include autoimmune processes.
Objectives. The aim of this study was to determine the autoimmune processes after anti-TNF therapy for rheumatic diseases.
Material e Methods. This study included 67 patients who were treated with anti-TNF drugs for rheumatoid arthritis and ankylosing spondylitis. Thirty-two patients with rheumatoid arthritis and thirty-five patients with ankylosing spondylitis were monitored. Thirty-five patients receiving infliximab, sixteen patients receiving adalimumab, sixteen patients receiving etanercept. According to the rheumatic diseases groups and anti-TNF therapies groups, the patients were divided into subgroups. The ANA and anti-dsDNA antibody levels were identified by the immunofluorescence method and ACA antibody levels were identified by the ELISA methods.
Results. In this study, the percentages of ANA positivity in sixty-seven patients range from 10,4% to 40,3%. Whereas only one patient had serum level of anti-dsDNA, no patient had serum level of ACA. ANA induction was more important under infliximab than with the two other anti-TNF blockers. No patients developed clinical symptoms of lupus that had been seroconversion of antibody. ANA was not influenced by the underlying rheumatism or anti-TNF combined therapies with methotrexate and corticosteroids.
Conclusions. Anti-TNF induced autoantibodies are common following therapy with all of the currently available anti-TNF therapies. ANA production is more induced with infliximab than etanercept and adalimumab. It is not dependent on the underlying diseases and by the concomitant treatment with methotrexate and corticosteroid. Anti-TNF induced autoimmunity was exceptionally associated to clinical manifestations lupus.
Keywords. Autoimmunity, anti-TNF drugs, rheumatoid arthritis, ankylosing spondylitis

P-078

Relation Between Bone Erosion in Premenopausal RA Patients and Bone Loss

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Background. Local bone erosion and systemic bone loss are hallmarks of rheumatoid arthritis and cause progressive disability. Numerous soluble and cell-membrane factors produced by rheumatoid synovial tissues are likely to play a role in the initiation and progression of bone erosion. Recent studies have suggested the role of these factors in their systemic effects on bone remodeling that are associated with generalized osteopenia and osteoporosis of the axial and appendicular skeleton.
Objectives. The aim of this work was to assess bone erosion in premenopausal RA patients and its relation to bone loss at the wrist.
Methods. Forty-three RA patients diagnosed according to 2010 ACR/EULAR criteria (31 ACPA positive 39±7 years and 12 ACPA negative 43±6 years) and 30 healthy premenopausal females 40±7 years were included in this study. Bone erosion were assessed by the modified total Sharp score (mTSS). Bone mineral density (BMD) of distal forearm was measured by dual energy X ray absorptiometry (DXA).
Results. The mTSS was markedly higher (p=0.002) in ACPA positive patients compared to ACPA negative patients. There was a statistically significant correlation between joint damage and both disease duration as well as bone loss in the wrist and femur in the ACPA positive patients only (p<0.001, p=0.046 & p=0.008 respectively).
Conclusions. More aggressive joint damage is found in the ACPA positive patients than in the ACPA negative patients. Joint damage has a positive correlation with disease duration as well as bone loss at the wrist and femur.
Keywords. Rheumatoid arthritis, bone erosion, osteopenia, bone loss, premenopausal, modified sharp score, DXA.

P-079

Assessment of Thyroid Disorders and Autoimmunity in Patients with Rheumatic Diseases

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Introduction. The development of AITD in the course of RDs is frequent, although its pathogenesis and clinical significance remain unclear. We investigated whether there was a significant increase in thyroid autoimmunity, and disorders in patients with rheumatic diseases (RDs).
Material-Method. We enrolled 201 patients with RDs (41 with ankylosing spondylitis, 15 with systemic lupus erythematosus, 80 with rheumatoid arthritis [RA], 65 with familial Mediterranean fever), and 122 healthy controls. Levels of serum thyroid-stimulating hormone (TSH), free triiodothyronine (fT3), free thyroxine (fT4), C-reactive protein, and thyroid autoantibodies (anti-thyroglobulin and anti-thyroid peroxidase) were measured in all participants. There were no significant differences between the ages of the participants.
Results. The mean TSH values of the patients with RDs and the controls were 3.1±2.68mIU/Land 1.9±0.83mIU/L, respectively (p=0.004). The mean fT4 values of patients with RDs and the controls were 1.43±0.67ng/dL and 1.58±0.68ng/dL, respectively (p<0.001). Subclinical hypothyroidism was detected in 24 patients with RDs. Thyroid antibodies were detected in 16 of 201 (8%) RD patients. Three of these patients had subclinical hypothyroidism, while the others were euthyroid. Thyroid autoantibodies were statistically significantly higher in patients with RDs (p<0.001). Additionally, thyroid disorders were observed more frequently in patients with RDs than in the healthy controls.
Conclusion. Because of the high prevalence of AITDs and antithyroidantibodies in RD patients, it is clinically important to screen patients with autoimmune RDs for the presence of thyroid autoimmunity. We recommend that thyroid function tests be included in the clinical evaluation of patients with RDs.
Keywords. Free triiodothyronine, rheumatic diseases, thyroid autoimmunity, thyroid disorders, thyroid function tests, thyroid stimulating hormone.

Table I. The demographic and laboratory features of patients and control groups.

	AS N=41 (%20)	SLE n=15 (%7)	RA n=80 (%40)	FMF n=65 (%33)	RD (Total patients) n=201	Control group n=122	RD vs Control p
Age (years)	45.73±13.1	39.33±10.34	48.1±10.25	30(20-57)	42.07±12.5	40.5±10.91	0.294
Gender (M/F)	24/17	1/14	17/63	31/34	73/128	47/75	0.691
TSH(mIU/mL)	1.9 (0.1-13.1)	3.1±1.75	2.1 (0.01-20)	3.2 (0.6-12.4)	3.1±2.68	1.9±0.83	0.004
fT4(pg/ml)	1.3 (0.5-2.5)	1.29±0.31	1.2 (0.4-3.3)	1.4 (0.9-6.5)	1.43±0.67	1.58±0.68	<0.001
fT3(pg/ml)	2.86±0.721	2.86±0.66	2.75±0.63	2.9 (1.3-4.2)	2.8±0.67	2.8±0.61	NS
CRP(mg/dl)	0.8 (0.1-6.9)	0.7 (0.1-3.7)	0.7 (0.1-14)	0.8 (0.1-41)	1.74±3.64	0.75±0.52	0.031
TPOA(P/C)%	2/39 (%5)	3/11 (%20)	7/73 (%9)	4/61 (%6)	16/185 (%8)	2/120 (%1.6)	<0.001
TgA(P/C)%	2/39 (%5)	3/11 (%20)	7/73 (%9)	4/61 (%6)	16/185 (%8)	1/120 (%0.8)	<0.001

Mann- Whitney U Test was used; RD: Rheumatic disease; AS: Ankylosing spondylitis; SLE: Systemic lupus erythematosus; RA: Rheumatoid arthritis; FMF: Familial Mediterranean Fever; TSH: Thyroid stimulating hormone; fT4: free tetraiodothyronine; fT3: free triiodothyronine; CRP: C-reactive protein; NS: Non significant; TgA: Thyroglobulin antibodies; TPOA: Thyroperoxidase antibodies; P: Patient.

Table II. The distribution according to gender of thyroid diseases in patients.

	AS (M/F)	SLE (M/F)	RA (M/F)	FMF (M/F)	RD (M/F)	CONTROL (M/F)
PHypoT	-/1	-/-	-/-	-/-	-/1	-/-
SHypo	3/-	-/2	3/7	4/5	10/14	-/-
PHyperT	-/-	-/-	-/-	-/-	-/-	-/-
SHyper	-/-	-/-	1/-	-/-	1/-	-/-

RD: Rheumatic disease; AS: Ankylosing spondylitis; SLE: Systemic lupus erythematosus; RA: Rheumatoid arthritis; FMF: Familial Mediterranean Fever; PHyperT: primary hyperthyroidism; SHypo: Subclinical Hypothyroidism; SHyper: Subclinical hyperthyroidism; PHypoT: primary hypothyroidism; M: Male; F: Female.

P-080

MMP-3 Serum Level Correlates with Conventional Parameters of Disease Activity but not with Functional Status in RA Patients during Etanercept Therapy

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Background. Matrix metalloproteinase-3 (MMP-3) is involved in the immunopathogenesis of rheumatoid arthritis (RA) by inducing bone resorbtion and cartilage destruction. MMP-3 production is increased in RA and has been proposed as a marker of the joint damage. It is generally believed that persisting inflammatory synovitis causes joint damage and subsequent disability.
Objectives. To evaluate the modulation of serum MMP-3 by therapy with soluble tumour necrosis factor alpha receptor Etanercept (ETN), their relationship with conventional disease activity variables and functional status in RA patients.
Methods. 84 patients with moderate-to-severe RA despite conventional DMARD therapy received ETN 50 mg weekly subcutaneously for 24 weeks. The baseline data of these 84 patients include 71 (85%) women, mean age 52±13,3 years, mean duration 9,3±8,3 years, RF positive were 68 (81%), ACCP positive-70 (83%), extraarticular manifestations were presented in 15 (18%), 52 (62%) used methotrexate, 22 (26%)-leflunomide, 9 (11%)-other DMARDs. 32 (38%) administered low dose of corticosteroids (<=10 mg/day). 50 (60%) had used another biologics prior to start of ETN. Disease characteristics evaluated were joint count, patient pain and disease activity visual analog scale (VAS), physician disease activity VAS, erythrocyte sedimentation rate (ESR), C-reactive protein (CRP) at weeks 0,12,25. MMP-3 serum levels (Invitrogen, USA) were determined with ELISA at the same time points. Serum samples from 21 healthy subjects served as control. The functional capabilities of the patients were assessed using the Health Assessment Questionnaire (HAQ) and Routine Assessment of Patient Index Data 3 (RAPID3).

Results. Baseline median serum MMP-3 was 1,01 [0,64-1,67] ng/ml. The serum MMP-3 before treatment correlated with the baseline CRP level (r=0.60, $p<0.001$) and baseline ESR (r=0.50, $p<0.001$). We found weak positive association between baseline MMP-3 and some clinical parameters of disease activity (joint count, VAS pain, RA activity). Following ETN treatment, the median serum level of MMP-3 decreased significantly up to 0,57 [0,32-0,89] ng/ml at week 25 ($p<0,001$). We did not determine any correlation between serum MMP-3 and functional status according HAQ and RAPID-3 ($p=0.58$ and 0.48 respectively).
Conclusion. ETN therapy significantly down-regulated serum levels of MMP-3 in parallel with the reduction in conventional inflammatory parameters (CRP and ESR) in RA patients. Our data suggest previous findings that cartilage damage and disability may be dissociate from disease activity of RA.
Keywords. Rheumatoid arthritis, MMP-3, disability, inflammation, Etanercept.

P-081

Efficacy of Ketoprofen vs Ibuprofen for Treating Pain in Patients with Rheumatoid Arthritis: A Systematic Review and Meta-Analysis

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Background. Patients with rheumatic diseases, including rheumatoid arthritis (RA), describe symptoms like pain and stiffness as important factors affecting their quality of life. Of the treatment options available for RA, NSAIDs, such as ketoprofen and ibuprofen, are the most widely used drugs to decrease inflammation and to manage mild-to-moderate pain.
Objectives. In our previous meta-analysis, we demonstrated that ketoprofen was superior to ibuprofen in relieving different kinds of moderate-to-severe pain conditions, and so the aim of this systematic review of the literature and meta-analysis of randomised controlled trials (RCTs) was to compare the clinical efficacy of the two drugs in patients with the specific pain associated with RA.
Methods. A systematic literature search was performed on main scientific databases (Medline and Embase) from inception to March 2014 in accordance with the Cochrane Collaboration guideline in order to identify RCTs comparing directly recommended therapeutic doses of oral ketoprofen (50-200 mg/day) vs ibuprofen (600-1800 mg/day) for RA pain relief. The meta-analysis was made using the standardized mean differences (SMD) of each included RCT. A fixed effects model was adopted.
Results. A total of 5 RCTs, involving 456 patients met the inclusion criteria. The result of meta-analysis showed a statistically significant difference in clinical efficacy in favour of ketoprofen vs ibuprofen (SMD=0.34; CI 95% 0.16-0.52; $p=0.0002$). The heterogeneity test for the efficacy outcome was not statistically significant and equal to zero ($\chi2=3.67$- df=4 - $p=0.45$ – $I^2=0\%$) demonstrating homogeneity of included trials and the validity of meta-analysis results. In addition, studies included in this meta-analysis did not reveal any significant differences between the two drugs in terms of tolerability (% of patients who developed adverse events) and safety (withdrawn patients).
Conclusions. The result of this meta-analysis shows that ketoprofen at therapeutic doses is more efficacious than ibuprofen in managing RA-related pain, supporting its use in clinical practice.
Reference
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Keywords. Pain relief, rheumatoid arthritis, NSAIDs, meta-analysis.

Study or Subgroup	Experimental Mean	SD	Total	Control Mean	SD	Total	Std. Mean Difference Weight	IV, Fixed, 95% CI
Boey 1988	1.6	2.8	24	0.4	2.5	17	8.0%	0.44 [-0.19, 1.07]
Calin 1977	14	3.45	52	13	3.88	50	20.8%	0.27 [-0.12, 0.66]
Huskisson 1976	3.6	0.8	90	3.4	0.8	90	36.7&	0.25 [-0.04, 0.54]
Mills 1973	0.62	1.7	34	0.36	1.7	34	13.9&	0.15 [-0.32, 0.63]
Montrone 1979	0.46	0.364	53	0.22	0.364	53	20.6%	0.65 [0.26, 1.05]
Total (95% CI)			253			244	100.0%	0.34 [0.16, 0.52]

Heterogeneity: $Chi^2 = 3.67$, df = 4 (P = 0.45); $I^2 = 0\%$
Test for overall effect: Z = 3.74 (P = 0.0002)

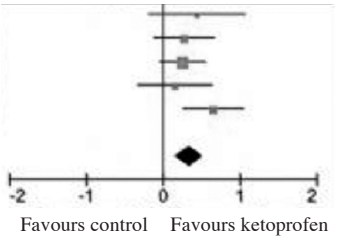

Fig. 1. Meta-analysis result.

P-082

The Role of Nailfold Capillaroscopy to Determining Microvascular Changes in Patients with Rheumatoid Arthritis

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Background. Nailfold capillaroscopy (NVC) is an imaging technique, noninvasive, inexpensive, easy to repeat, which has an important role in assessing microcirculation in vivo. Rheumatoid arthritis (RA) is an immune-mediated disease, a chronic inflammatory disorder that typically affects the joints, but in addition, sometimes can affect other organs of the body - such as the skin, eyes, lungs, heart, kidney and blood vessels.
Objective. The purpose of this study was to evaluate the practical utility of NVC in patients with RA, and define changes in the distribution and morphology of nailfold capillaries at these patients.
Material-Method. 101 consecutive patients with RA diagnosed at ACR / EULAR 2010 criteria were assessed NVC. Changes nailfold capillaries were evaluated by VideoCap 3.0 magnification contact lenses 200x. Capillaroscopic examinations were performed at fingers II - V on both hands in all patients. The finding classifications capillaroscopy was made in according to Maricq criteria. Indicators for microangiopathy were giant capillary, haemorrhages, avascular areas and neoangiogenic capillaries, reduces of blood flow /stasis (observed in dynamic). At all patients were calculated disease activity score (DAS 28-ESR) and were determined antinuclear antibodies (AAN) by Elisa method.
Results. 19 patients was male and 82 patients female, mean age (years) 56,20±10,16SD, disease durations (years) 8,65±5,31SD, DAS 28-ESR: 4,32±1,09SD. 29% patients are current or former smoker, 35% presented AAN positive and 32% presented at hands vasospastic skin modification (RF). We find capillaroscopic changes (elongated capillaries, dilated loops, giant capillaries and visible subpapillary plexus) at RA patients in associations with RF p-0,0015 DAS28-ESR p-0,027, AAN positive p-0,017. Microbleeding, neoangiogeneza and avascular areas were observed in patients with DAS 28-ESR>=5.3 and AAN positive.
Conclusions. 1. capillaroscopic changes in patients with RA are nonspecific 2.elongated capillaries, dilated loops, giant capillaries and visible subpapillary plexus, appear more frequently in patients with RF, DAS 28 ESR >=4.6 and AAN positive 3. microangiopaty modifications is frequent in patients with RF, DAS 28 ESR >=5.3 and AAN positive
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Keywords. Rheumatoid arthritis, microvascular damage, naifold capillaroscopy.

P-083

Open Label, Prospective, Non-Interventional, Observational Study for the Safety and Efficacy of Certolizumab Pegol in Patients with Rheumatoid Arthritis in Everyday Routine Practice in Greece

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Background. Certolizumab pegol (CZP) has been demonstrated to improve signs, symptoms and physical function and to reduce the rate of joint damage progression in rheumatoid arthritis (RA) patients (pts).
Objective. To evaluate response of RA pts to CZP treatment in a post-marketing everyday practice setting, over 24 weeks (wks), measured by Simplified Disease Activity Index (SDAI). Safety objectives included adverse events (AEs) over the study period.
Methods. This open-label, prospective, non-interventional, observational study included RA pts in Greece eligible to receive CZP. Pts received CZP according to the Summary of Product Characteristics (SmPC).[1]Primary efficacy variable was the observed wk24 response to CZP: pts achieving SDAI<20 and/or >22 SDAI score reduction from baseline (BL). Secondary variables were SDAI response to CZP at 12 wks, observed wk12 and wk24 SDAI scores and SDAI wk12 and wk24 change from BL (CFB). Other variables included CDAI response to CZP at 12 wks, and observed wk12 and wk24 CDAI scores. Post-hoc imputation was applied to SDAI response (NRI), and SDAI and CDAI scores (MMRM). Efficacy analyses were performed on Per Protocol Set (PPS), reported from all enrolled pts who received >=1 CZP dose with available BL and post-BL SDAI score, excluding pts with BL SDAI <10. Safety data are presented for Safety Set, defined as all enrolled pts who received >=1 CZP dose.
Results. Of 149 pts enrolled, 121 (81.2%) completed 24 wks CZP treatment and 119 (79.9%) completed the additional 2-wk safety follow-up (wk26); 30 pts (20.1%) discontinued by wk26, 5 due to AEs. Mean age, 60.6 yrs; female, 87.2%; mean time since diagnosis, 7.7 years. 97.3% had previously failed therapy with >=1 synthetic DMARD and 40.9% an anti-TNF agent. 83.9% previously received corticosteroids. SDAI response rate for PPS (n=85): wk12, 67.5% (observed, n=77); 61.2% (NRI); 67.1% (MMRM); wk24, 80.8% (observed, n=73); 69.4% (NRI); 76.5% (MMRM). Figure shows mean SDAI and CDAI CFB scores. Wk24 SDAI response rate was higher in anti-TNF naive vs exposed pts; observed: 84.4% vs 75.0%, NRI: 73.1% vs 63.6%, MMRM: 78.8% vs 72.7%. Safety results (n=149): 28 pts (18.8%) reported treatment emergent AEs (TEAEs, 39 events); 25 events (20 pts, 13.4%) were drug-related. Most frequent TEAEs were infections (16 events, 15 pts) and nervous system disorders (5 events, 4 pts). 8 (5.4%) pts reported serious TEAEs, including 3 events of serious infections (1 event each of lower respiratory tract infection, respiratory tract infection, sinusitis). There were no deaths or malignancies.

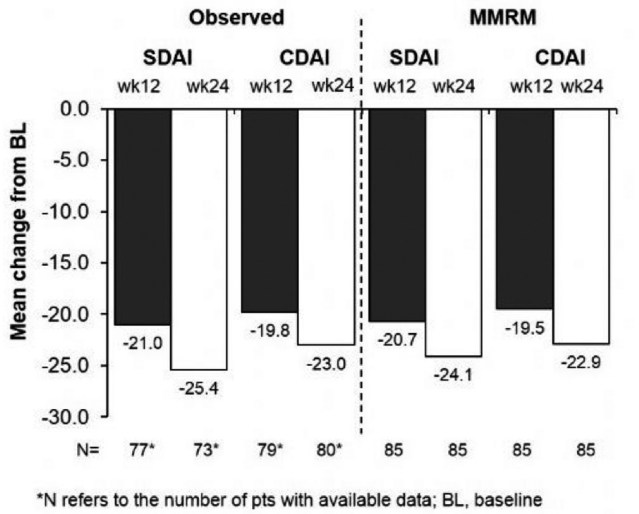

Fig. 1. Mean change from BL in SDAI and CDAI scores at wk12 and wk24; observed and MMRM imputation, PPS.

Conclusions. In daily practice, over 80% of pts remained on CZP treatment after 6 months. SDAI<20 and/or SDAI score reduction>22 was achieved in anti-TNF naïve and exposed pts, at 12 and 24 wks. No new safety signals were observed.
References
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Keywords. Certolizumab pegol, rheumatoid arthritis treatment, SDAI response, CDAI response.

P-084

Assessment of Fifth Metatarsophalangeal Joint Erosion in Rheumatoid Arthritis by Ultrasonography

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Background. Joint erosions in RA correlate with structural damage progression and functional capacity. Therefore, detection and the follow-up of erosions are of paramount importance for RA diagnosis, monitoring and prognostication. The 5th MTP is usually the first and most commonly destructed joint in RA. Ultrasound (US) is a useful and as good tool as MRI to detect 5th MTP erosions especially in early RA patients. Although a few MRI studies revealed that most of the MTP erosions were located at the plantar aspect of the joint, it is unknown whether plantar or dorsal or lateral plane US better detects 5th MTP erosions.
Objective. To determine the best ultrasonographic plane for detection of 5th MTP joint erosion in RA patients and to assess clinical characteristics of patients with 5th MTP erosions.
Methods. The 5th MTP of 92 feet of 48 RA patients were evaluated by B-mode and Power- Doppler US for signs of erosion. US images were obtained from 3 different aspects, the dorsal, lateral and the plantar surface of the foot, in longitudinal and transverse scans. The presence of erosion was determined according to OMERACT definition. Patients were also assessed clinically (tender/swollen joint count, DAS28, HAQ scores) along with disease characteristics. Each erosion in each aspect were recorded separately.
Results. The study cohort consisted of 48 RA patients (F/M=35/13, mean age 50.7±12.3 years, mean DAS28 score 4.04±1.47, HAQ score 0.94±0.88) with mean disease duration of 8.2±7.3 years. RF and anti- CCP positivity were 66.7% and 60.4% respectively. The 5th MTP erosions were detected in 35 of 48 patients (72.9%) and 62 of 92 feet (67.4%). Of the erosions 15 (16.3%) were observed at dorsal plane whereas plantar and lateral planes revealed majority of the erosions, 53 (57.6%) and 52 (56.5%), respectively. In 26 feet (28.3%), erosions were observed on both plantar and lateral planes, in 15 feet (16.3%) erosions were observed in all three planes. None of the patients had erosion just in dorsal plane examination of the 5th MTP. The presence of 5th MTP erosion in plantar aspect of foot was significantly higher than both lateral and dorsal aspect (p<0.0001, (p=0.002, respectively). Patients with dorsal erosion had significantly higher disease duration (13.8 years vs 6.5 years, (p=0.005). Patients with erosions in any aspects have similar disease characteristics including RF, anti-CCP positivity, disease duration, HAQ scores and current biologic requirement, when compared to patients without erosions.
Conclusion: The 5th MTP erosions in RA patients can be better detected with plantar plane US than dorsal and lateral aspect evaluations. These data also indicate that dorsal aspect US of foot may miss erosions in early disease and insufficient when performed solely.
Keywords. Rheumatoid arthritis, fifth metatarsophalangeal joint erosion, ultrasonograph.

P-085

Cardiovascular Risk Estimation in Rheumatoid Arthritis: What is Missing in Traditional Risk Estimators?

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Background. Cardiovascular (CV) disease is one of the major causes of mortality in rheumatoid arthritis (RA). Although the CV risk in RA is well-recognized, detection of high risk patients and prevention of CV disease are still major challenges.
Objective. To determine which CV risk estimation index is better in RA patients and to determine the factors that may improve CV risk estimation in RA.
Methods. One-hundred and six consecutive RA patients without history of CV disease or diabetes mellitus were assessed. Systematic Coronary Risk Evaluation (SCORE) and 2013 American College of Cardiology /American Heart Association (ACC/AHA) 10-year atherosclerotic CV disease risk (ASCVD) indices and their modified versions (mSCORE and mASCVD risk) according to EULAR recommendations were calculated. All patients were evaluated with carotid ultrasonography (US). Carotid intima-media thickness (cIMT) > 0.90 mm and/or carotid plaques were used as the gold standard test for subclinical atherosclerosis and high CV risk (US+).
Results. The study cohort consisted of 106 RA patients (F/M= 93/13, mean age 51.7±11.3) with a mean disease duration of 9.9±6.2 years. RF and anti-CCP positivity were 78.3% and 61.3%, respectively. The EULAR multiplier factor was used in 41 (38.6%) patients. The mean mSCORE was 1.70±2.95% and mASCVD risk was 4.4.1±5.83%. The mSCORE defined 6 (5.7%) patients and mASCVD defined 28 (26.4%) patients as having high/very high CV risk (mSCORE>=5%, mASCVD>=7.5%). Concerning US results, 28 (26.4%) patients had either cIMT> 0.90 mm or carotid plaques. The mASCVD risk better identified US+ patients, that of the US(+) patients 16 (57.1%) were in mASCVD high/very high risk group whereas only 4 (14.3%) of the US(+) patients were in high/very high risk group according to mSCORE (p<0.0001). However mASCVD risk still has failed to identify 42.9% of US(+) patients. When traditional risk factors and disease characteristics of US(+) and US() patients were compared, it was found that US(+) patients were older at diagnosis, had higher triglyceride levels and erythrocyte sedimentation rates. Furthermore current methotrexate use was lower in US(+) patients along with similar rates of biologic treatment and other traditional risk factors (Table I).
Conclusion. EULAR recommendation for CV risk assessment, SCORE, seems inadequate even after modification according to RA characteristics. On the other hand ACC/AHA 10-year ASCVD risk index is better in estimating CV risk in RA patients. However, still additional modifications, like age at disease onset, methotrexate usage, ESR are required to fully identify high-risk RA patients.
Keywords. Rheumatoid arthritis, cardiovascular risk estimation, SCORE.

Table I. Characteristics of US (+) and US (–) RA patients.

	US+ (n=28)	US– (n=78)	*p* Value
Female, n (%)	20 (71.4%)	73 (93.6%)	0.002
Age at diagnosis (years)	48.1±8.8	39.5±12.0	0.001
Disease duration (years)	10.1±7.6	9.8±5.6	0.81
RF and/or Anti-CCP positivity, n (%)	22 (78.6%)	61 (78.2%)	0.96
Extra-articular involvement	5 (17.9%)	23 (29.5)	0.23
ESR (mm/h)	27.5±18.8	20.2±15.2	0.044
CRP (mg/L)	13.1±18.3	11.0±22.7	0.65
HAQ score	0.46±0.5	0.61±0.63	0.27
Prediabetes	7 (25%)	8 (10.3%)	0.055
Triglyceride (mg/dL)	151.0±121.8	106.5±46.6	0.007
m SCORE	2.9±2.7	1.2±2.9	0.008
m ASCVD	8.8±8.2	3.9±6.0	0.001
Current corticosteroid, n (%)	15 (53.6%)	40 (51.3%)	0.83
Current methotrexate, n (%)	8 (28.6%)	41 (83.7%)	0.029

The values were presented as mean ± SD.

P-086

Ultrasonographic Assessment of Joint Inflammation in Rheumatoid Arthritis: Predictive Value in Response to Tumor Necrosis Factor-A Inhibitor Treatment

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Background. Tumor necrosis factor-α inhibitors (TNFi) are highly effective in patients with RA, while not effective in all, with predictors of response being necessary. Although genetic, inflammatory and serologic biomarkers are under major investigation for this purpose, little is known about the predictive value of ultrasonographic parameters in RA.
Objective. To investigate the ability of ultrasonographic parameters to predict which patients with RA will benefit from the treatment with TNFi in terms of EULAR response.
Methods. Biologic-naive RA patients starting treatment with TNFi were examined longitudinally by ultrasonography (US) (Gray-Scale [GS] and Power Doppler [PD]) of 28 joints according to standard scans of EULAR guideline and clinically (Tender/swollen joint count, DAS28, HAQ scores) at baseline and 3rd, 6th and 12th months. US examinations were performed by an experienced sonographer (NI) using MyLab 70 US machine (Esaote, Italy). US synovitis GS and PD signals were semiquantitatively graded from 0 to 3. Total PD and GS synovitis scores of all sites are recorded as sum scores of PD and GS, respectively. The clinical response was evaluated according to the EULAR response criteria at 3rd month. Potential ultrasonographic predictors of response were identified using multivariate binary logistic regression models.
Results. The study cohort consisted of 43 RA patients (F/M=34/9, mean disease duration 8.0±6.7 years, mean DAS28 score 5.4±1.1) who were either RF or Anti-CCP positive. Baseline characteristics of TNFi responders (29/43) and non-responders (14/43) are shown in Table I. Extra-articular involvement (p=0.014), pain VAS (p=0.009), sum scores of baseline PD (p=0.029) and GS (p=0.020) and PD+GS (p=0.023) differed significantly between responders and non-responders. Baseline PD sum score was the only ultrasonographic parameter in the multivariate analysis predicting which patients achieve good/moderate EULAR response with TNFi at 3rd month (OR=0.88; CI:95% 0.68-0.94, p=0.04). Responders at 3rd month were also more likely to achieve LDA or remission at 1 year (p=0.019 and p=0.008, respectively). The mean PD and GS sum scores decreased significantly from baseline to 3 months (p<0.001 for both) whereas decrease between 3rd and 6th months was nonsignificant for PD and GS scores (p=0.68 and p=0.77, respectively).
Conclusion. Our data underline that baseline PD scores, despite similar clinical features, can predict which patients will respond to TNFi therapy. Responders at 3rd month mostly preserve initial response and more likely to achieve LDA at 1 year. Ultrasonographic response to TNFi treatment can be achieved substantially in the first 3 months. Beyond 3rd month changes in US scores are mostly nonsignificant.
Keywords. Rheumatoid arthritis, tnf inhibitors, response prediction, ultrasonography

Table I. Baseline characteristics of TNFi responders and nonresponders at 3rd month.

Parameter	Responders (n=29)	Non-responders (n=14)	*p* Value
Female (%)	22 (75.9)	12 (85.7)	0.45
Age (years)	46.7±11.6	45.7±11.8	0.83
Disease duration (years)	6.6±5.8	10.7±7.8	0.059
Treatment delay (months)	22.6±38.9	30.9±36.9	0.50
Current smoker (%)	8 (27.6)	3 (21.4)	0.66
Extra-articular involvement (%)	3 (10.4)	6 (42,9)	0.014
RF titer (IU/mL)	217.4±247.9	276.4±542.9	0.62
Anti- CCP titer (U/mL)	158.3±270.2	303.7±439.5	0.18
DAS28	5.4±1.0	5.5±1.5	0.90
USDAS28 GS	5.6±1.0	6.0±1.3	0.31
USDAS28 PD	5.6±1.0	6.0±1.3	0.31
Patient global assessment (0-100 mm)	60.8±17.0	78.5±16.5	0.002
Physician global assessment (0-100 mm)	60.8±17.0	72.5±16.4	0.068
Pain VAS (0-100 mm)	61.2±18.6	72.5±16.4	0.009
ESR (mm/h)	39.7±22.8	35.9±23.4	0.61
CRP (mg/L)	21.2±25.5	21.4±26.2	0.98
TJC (0-28)	9.4±7.1	11.8±9.7	0.12
SJC (0-28)	5.5±4.9	9.0±7.8	0.05
USJC in GS (0-28)	7.5±3.3	10±6.4	0.10
USJC in PD (0-28)	6.5±2.6	8.7±5.9	0.10
HAQ score	1.18±0.67	1.39±0.54	0.31
Prednisolone dose, mg/day	6.6±2.8	5.7±1.8	0.30
Sum score of PD signal (0.84)	11.7±5.6	18.1±12.9	0.029
Sum score of GS signal (0-84)	14.6±7.7	23.2±15.3	0.020
Sum score of PD and GS signals (0-168)	26.9±12.9	41.5±28.0	0.023

The values were presented as mean ± SD.

P-087

The Level of Formal Education Influences the Severity of Rheumatoid Arthritis. Data from an Algerian Multicenter Study

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Background. Since the introduction of consensual tools in the evaluation of Rheumatoid arthritis (RA), as determined by OMERACT, no study has been carried out to objectively evaluate the influence of the level of education in the determination of the severity and activity of RA.
Objectives. To evaluate the impact of previous formal education on the activity and severity of patients with RA.
Methods. Assessment at baseline and 6-month follow-up of 249 patients with RA from 11 centers. Patients were categorized according to their previously received formal education (not having attended school, primary school, secondary or high school, college). Evaluation of activity was based on the baseline DAS28, CRP and ESR values and the 6-months changing in DAS28. Evaluation of severity was based on values of baseline Health Assessment Questionnaire (HAQ). Statistic tests were performed using ANOVA and ANCOVA (p<0.05 significant).
Results. Patients with lower formal education presented with a more active disease as judged by the DAS28 (from lower to higher education: 4,80 - 4,90 - 4,12 - 3,91 respectively; p=0,025) and a trend to a more severe disease as judged by the HAQ (0,94 - 0,77 - 0,55 respectively; p=0,106). These differences remained after adjustment for age, sex, duration of disease, the used DMARD and the employment status (p=0,047 and 0,147, respectively). Also, there were less patients under remission in lower education categories (DAS28<2,6 in 13 - 6 -12 - 32% patients respectively; p=0,044). Non-significant trends were seen with baseline CRP (p=0,19) and changing in DAS28 between M0 and M6 (p=0,215).
Conclusions. Measures indicated substantially poorer clinical RA in lower Formal education categories. This work brings some evidence that the level of education has an effect on the outcome of RA.
Keywords. Rheumatoid arthritis, education, severity.

P-088

Efficacy of Tocilizumab on MRI-Determined Bone Oedema in Rheumatoid Arthritis

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Objectives. To assess the impact of Tocilizumab on bone oedema in rheumatoid arthritis as shown by MRI
Methods. In this longitudinal study, were included patients with rheumatoid arthritis RA according to the American College of Rheumatology ACR 1987 criteria with inadequate response or intolerance to DMARDs,treated with tocilizumab (TCZ). Sociodemographic characteristics, clinical and laboratory for the disease were collected at baseline (M0) and 06 months (M6) of treatment. Disease activity was assessed using DAS28, SDAI et CDAI.MRI of the dominant hand was performed at baseline and M6 of treatment. The primary outcome was the assessment of bone oedema by RAMRIS bone oedema (Rheumatoid Arthritis MRI Scoring system). Secondary outcomes included:RAMRIS synovitis,DAS28 CRP,CRP, and SDAI at baseline and M6.
Results. 22 patients with RA were included,19 females (86.4%),with a mean of age 42±13.7. The mean disease duration was 8±5.2 years. The mean DAS28 was 5.8±0.94. The median CRP was 16 mg / l (6.7 to 36.3). The average SDAI was 90±34. Three patients were excluded from the study for serious side effects. At baseline, bone edema was present in 41% of patients (N=9), with a median bone oedema RAMRIS 0 (0 to 7.2). A M6, bone oedema decreased or disappeared in 32% (N=7) with a significant improvement in the score RAMRIS bone oedema (p=0.04). Moreover, there is a significant improvement RAMRIS synovitis (p<0.0001) as well as activity parameters: DAS28CRP (p<o, ooo1), CRP (p<0.0001) and SDAI (p<0.0001).
Conclusions. This study suggests that Tocilizumab is associated with a significant improvement in MRI-determined bone oedema in the short term. This improvement in bone oedema is correlated with improved parameters of disease activity, which could be discussed early structural effect. Further studies are needed to confirm these results.
Keywords. Rheumatoid arthritis, tocilizumab, bone oedema, magnetic resonance imaging.

P-089

The MRI Features in Patients with Rheumatoid Arthritis in Clinical Remission or Low Disease Activity State

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Objectives. To evaluate in patients with RA in clinical remission or low disease activity (LDA),the synovitis and the osteitis using MRI by OMERACT RAMRIS score (RAMRIS bone edema and synovitis RAMRIS).
Methods. In this longitudinal study, were included patients with rheumatoid arthritis RA according to the American College of Rheumatology ACR 1987 criteria with inadequate response or intolerance to DMARDs, treated with tocilizumab (TCZ). Sociodemographic characteristics, clinical and laboratory for the disease were collected at baseline (M0) and 06 months (M6) of treatment. Clinical remission was defined by a DAS28-CRP <2.6.
The low disease activity (LDA) was defined by DAS28-CRP <=2.6 <3.2. All patients underwent MRI of the dominant hand and wrist. MRI features were evaluated according to the Outcome Measure Clinical Trial in Rheumatoid Arthritis Rheumatoid Arthritis MRI Scoring system (OMERACT RAMRIS synovitis and bone oedema).
Results. 22 patients with RA were included, 19 females (86.4%),with a mean of age 42±13.7.
The mean disease duration was 8±5.2 years. The mean DAS28 was 5.8±0.94. Three patients were excluded from the study for serious side effects. At 06 months, 13 patients (52%) were in clinical remission, 04 patients (16%) in LDA, and 04 patients (16%) had active disease. The mean SDAI was 21.5±19.7. The mean CDAI was 16±19.6. The mean RAMRIS score was 2.23±6.33 for bone oedema, 4.76±4.02 for synovitis and 43.32±30 for erosion. Using DAS28CRP as criteria of remission, it did not exist significant differences between the 3 groups of patients (remission / LDA / active disease) for the presence of synovitis on MRI (p=0.67), and their severity (RAMRIS synovitis p=0.50). There was also no difference between the three groups for the presence of bone oedema (p=0.55), and their severity by
RAMRIS bone oedema (p=0.55). Moreover, defining remission by SDAI and CDAI, the RAMRIS synovitis and bone oedema RAMRIS did not differ by the level of disease activity. Thus synovitis and oedema bone are not frequent in patients in clinical remission (synovitis / osteitis: 69% / 75%) versus (15.4% / 25%) LDA.
Conclusions. This study suggests that patients in clinical remission or LDA evaluated by DAS28CRP showed no inflammation (synovitis and bone edema) on MRI. Although MRI and ultrasound are currently one of the criteria for remission in RA, further studies are needed in particular to determine the threshold definition of remission on MRI
Keywords. Rheumatoid arthritis, remission, low disease activity, magnetic resonance imaging

P-090

Comparison of Activity Score DAS28-ESR and DAS28 -CRP in Patients with Rheumatoid Arthritis

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Objectives. To compare the disease activity score DAS28- erythrocyte sedimentation (ESR) versus DAS28 –Creative protein (CRP), and to determine the factors that might influence their difference. To estimate the disease activity score DAS28-CRP threshold values that correspond to DAS28- ESR values in Moroccan patients with rheumatoid arthritis.
Patients and Methods. Patients with RA were included in a cross-sectional study. We have collected the demographic characteristics and the characteristics of the RA: duration of evolution, global disease activity on a 100 mm visual analogue scale assessed both by the patient (GDAP), morning stiffness in minutes, functional impact of the disease assessed by the HAQ (Health Assessment Questionnaire), and current corticosteroid dose. The disease activity was assessed by the DAS28-ESR and DAS28-CRP. A concordance correlation between DAS28-ESR and DAS28 -CRP was performed. We defined a new variable DIFDAS=DAS28-ESR – DAS28-CRP (differences between the two indexes). Factors influencing this difference were tested by univariate then multivariate logistic regression. Using DAS28-ESR as gold standard, the passing Bablok and

Bland- Altman methods were used to assess the agreement between DAS28-ESR and DAS28-CRP.
Results. 103 patients were included with a female predominance (87.4 %). Mean age was 49.7 ± 11.4 years. Median disease duration was 8 years [3-14]. There was a strong positive concordance between the two indexes of 0.93 with CI 95% [0.91-0.95], although the DAS28-ESR value obtained was higher than that of DAS28-CRP at approximately 90% of the visits (n=93). Significantly, the difference between both indexes was higher than 0.6 in 42.7% of the visits studied (n=44). In multivariate analysis, factors significantly associated with this difference was high global disease activity assessed by physician, high dose of steroids and significant functional impairment ($p<0.05$). There was a real difference between DAS28-ESR and DAS28-CRP values. Using bland and Altman method, we found that DAS28-CRP under-estimate threshold values of DAS28-ESR by 0.49 with CI 95% [-1.96, +1.96].
Conclusion. Our study showed a positive concordance between the DAS28-ESR and DAS28 -CRP. But DAS28-ESR would be higher than DAS28-CRP in patients with high dose of corticosteroids and significant functional impairment. Since DAS28-CRP under-estimate threshold values of DAS28-ESR, the threshold values should be reconsidered. As the results were derived from only Moroccan patients, other studies to compare DAS28-CRP threshold values in people of other ethnic groups are necessary.
Keywords. Rheumatoid arthritis, erythrocyte sedimentation rate, C-reactive protein, Disease activity score (DAS28).

P-091

Reliability and Validity of CDAI and SDAI in Comparison to DAS-28 in Moroccan Patients with Rheumatoid Arthritis

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Background. Clinical disease activity index (CDAI) and simplified disease activity index (SDAI) are useful tools for the evaluation of disease activity in patients with rheumatoid arthritis (RA), but have not been comparatively validated in Moroccan population.
Objectives. To assess validity and reliability of CDAI and SDAI in comparison to disease activity score-28 joints (DAS-28) in Moroccan patients with RA.
Patients and Methods. Patients with RA were included in a cross-sectional study. Patient characteristics and RA were collected. The disease activity was assessed by DAS-28, CDAI and SDAI. Patients were grouped into remission, low, moderate and high activity on the basis of pre-defined cut-offs for DAS-28, CDAI, and SDAI.
A Spearman correlation between a composite indices and inter-group comparison of the indices were performed. Using DAS-28 as gold standard, the Receiver operator characteristic (ROC) curve was used to assess the performance of a screening test at different levels
Results. 103 patients were included with a female predominance (87.4 %). Mean age was 49.7±11.4 years. Median disease duration was 8 years [3-14]. There was excellent correlation between DAS-28 and CDAI (r=0.95, $p<0.001$), CDAI and SDAI (r=0.90, $p<0.001$), and DAS-28 and SDAI (r=0.92, $p<0.001$). There was a good inter-rater agreement between the DAS-28 and CDAI (k=0.582, $p<0.001$) and there was a moderate inter-rater agreement between the DAS-28 and SDAI (k=0.446), and between the SDAI and CDAI (k=0.467, $p<0.001$). There was no statistically significant difference between AUROC of CDAI and SDAI and both performed equally well.
Conclusion. Our study shows a strong positive correlation between DAS-28, CDAI and SDAI. The cut-off values for CDAI and SDAI used in western literature can be used with minor modifications in Moroccan scenario.
Keywords. Clinical disease activity index, Simplified disease activity index, disease activity score 28 joints, rheumatoid arthritis activity.

P-092

Socio-Economic Impact of Rheumatoid Arthritis in the Moroccan Population between 2003 and 2013

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Objective. The impact of rheumatoid arthritis (RA) on quality of life and the socio-economic consequences are important. In 2003, a study was performed in our department, confirming these effects. After 10 years the prescription of medication is changed especially the wide use of methotrexate, then we want to re-evaluate the socio-economic impact of RA.
Patients and Methods. We identified patients with RA. The characteristics of the RA were collected. For each patient, we recorded the direct costs, indirect costs (loss of productivity) and intangible costs (impact on quality of life).
Results. 103 patients were included with a female predominance (87.4%). Mean age was 49.7±11.4 years. Median disease duration was 8 years [3-14]. 31 patients (30.1%) were in paid employment at the onset of the disease, including 38.7% stopped work because of illness. 100 patients (97.1%) were treated with methotrexate and 25 patients (24.3%) received biotherapy. Monthly expenditure on RA were in median of 375 dirhams [125-625]. 80 patients (77.7%) considered their spending for RA very high. Poor adherence to treatment was observed in 17 patients (16.5%). Sexual problems were reported by 35% of patients. RA has affected family relationships in 50.5% of cases. 5 patients were divorced because of their disease and they were all female. Truancy of children was reported by 7 patients.
Discussion and Conclusion. Among the 100 patients who were included in 2003, 26% of patients were treated by methotrexate and no patient was receiving biotherapy vs 97.1% taking methotrexate and 24.3% under biotherapy in 2013. In 2003, the median monthly expenditure on PR was 510 dirhams [0-2500] and poor adherence to treatment was observed in 61% of cases. 34 patients were initially active before RA and 64.7% have stopped working because of disease. 66.66% of the patients reported having sexual problems. After analyzing the results for the patients in 2003 and 2013, they are obviously different. There was significant change in drug prescribing patterns including the widespread use of methotrexate which has proven its performance, but the low socio -economic level of many patients and health insurance systems always contribute to the burden of RA on the socio- economic patients.
Keywords. Socio-economic impact, disease parameters, rheumatoid arthritis.

P-093

Does Mean Platelet Volume Really Reflect Disease Activity in Rheumatoid Arthritis?

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Background/Purpose. Accelerated atherosclerosis is a major contributor to premature mortality in Rheumatoid Arthritis (RA). Platelet activity is the main culprit in atherothrombotic events. Mean Platelet Volume (MPV) is a potentially useful biomarker of platelet activity. Previous studies have shown that MPV can reflect both proinflammatory and prothrombotic conditions. Overproduction of proinflammatory cytokines can interfere with megakaryopoiesis and suppress the size of platelets. So MPV values can indicate intensity of inflammatory process. However there are controversies in studies examining the MPV values in RA patients. Kisacik et al. examined 32 active RA patients and reported that MPV values were decreased in RA group when compared to the controls. Yazici et al. examined 97 RA patients and reported a positive correlation between MPV and DAS-28. Here we would like to evaluate the role of MPV values in assessment of the disease activity in RA patients.
Methods. Fifty-five RA patients classified according to ACR/EULAR 2010 criteria who were on conventional therapy were enrolled in the study. Demographic data, disease duration, erytrocyte sedimentation rate (ESR), C-reactive protein (CRP) levels were noted. Disease activity was assessed via Disease Activity Score-28 using CRP value (DAS-28). The complete blood count analysis was performed with Mindray BC-6800 automated blood cell counter. Blood samples were collected in citrate in order to avoid the platelet swelling that can be induced by EDTA.
Results. Of the 55 patients 48 were female (87.3%) and 7 were male (12.7%). Mean disease duration was 8.1±7.7 years. When patients were divided into groups according to the disease activity (DAS28), 30 patients (54.5%) were found to have low disease activity (DAS-28 <3.2), 22 patients (40%) had moder-

ate disease activity DAS-28 between 3.2 and 5.1) and 3 patients (5.5%) had high disease activity (DAS-28> 5.1). Mean MPV values of the groups were 9.44±0.98 fl, 9.18±1.20 fl and 10.53±1.98 fl respectively. There was no significant difference between groups with respect to MPV values. No statistically significant correlation was found between MPV and DAS-28, ESR and CRP values (r=0.044, *p*=0.750; r=-0.08, *p*=0.521; r=-0.033, *p*=0.813 respectively). Only a moderate positive correlation was found between disease duration and MPV values (r=0.342, *p*=0.011).

Conclusion. According to our results MPV is not correlated with disease activity parameters in RA patients. This can be due to the possible effect of confounding variables such as smoking, hypertension, diabetes and dyslipidemia which can potentially affect the MPV values. The moderate positive correlation between disease duration and MPV values can be important because elevated MPV is a predictor of cardiovascular risk. So the positive correlation between MPV and disease duration can be a contributor to the increased risk of cardiovascular events as the disease perpetuates.

Keywords. Mean Platelet Volume, Rheumatoid Arthritis, DAS-28.

P-094

The Prevalence of Geriatric Syndromes in Patients with Rheumatoid Arthritis and Relationship between Disease Activity

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Background. Rheumatoid arthritis (RA) is a chronic, systemic disorder in which the immune system attacks various tissues in the body, especially in the joints and it is common disease afflicting people above the age of 65 years. Geriatric syndromes (GS) are common clinical conditions in older adults. GS, such as dementia, falls, incontinence, depression and malnutrition, are highly prevalent, multifactorial, and associated with substantial morbidity and poor outcomes.

Objectives. The aim of this study was to investigate prevalence of GS in elderly patients with RA and relationship between disease activity of RA.

Method. A total of 117 (73 patients with RA, 44 patients in control group) older adults were included. All patients underwent a comprehensive geriatric assessment tests and Health Assessment Questionnaire (HAQ). Disease activity score (DAS28) and Routine assessment of patient index data (RAPID3) score were determined.

Results. There were no significantly differences between elderly patients with RA and control groups regarding age, gender, body mass index, education level and the rates of hypertension diabetes mellitus and coronary artery disease. Mini-Mental State Examination (MMSE), Mini-Nutritional Assessment Test-Short Form (MNA-SF) score were significantly lower, HAQ score and number of drug usage were significantly higher in patients with RA. The rates of malnutrition risk and polypharmacy were significantly higher and urinary incontinence rate was significantly lower in RA patients. The rates of depression, Alzheimer Disease and falls were higher in RA patients than control group but not significantly (Table I). In patients with RA, hemoglobin, total protein and albumin levels were significantly lower, erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) levels were significantly higher than controls. DAS28 was significantly and positively correlated with Geriatric Depression Scale (GDS) and HAQ and also significantly and negatively correlated with MMSE and MNA-SF.

Conclusions. The prevalence of GS (except incontinence) were higher in elderly patients with RA than control group. Rheumatologists should be aware of the impact of GSs on elderly RA patients.

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Keywords. Rheumatoid arthritis, geriatrics syndrome, elderly.

Table I. Prevalence of GS and comprehensive geriatric assessment test results in patients with RA and control group.

	RA (n=73)	Control (n=44)	*p*
Depression	29(%39,7)	11(25,6)	0,122
Alzheimer Disease	16(%21,9)	5(%11,4)	0,150
Malnutrition Risk	26(%35,6)	8(%18,2)	0,044*
Polypharmacy	65(%94,2)	10(%23,8)	<0,001*
Falls (n/%)	19(%26,0)	9(%20,5)	0,494
Incontinence	19(%26)	20(%46,5)	0,024*
MMSE	26,12±3,32	27,61±2,57	0,012*
HAQ	1(0-3)	0,4(0-2,5)	0,004*
GDS	13,01±7,71	10,53±6,64	0,082
MNA-SF	11,75±2,34	12,79±2,01	0,016*
Drug (n)	6,34±1,58	2,07±1,53	<0,001*

MMSE: Mini-Mental State Examination; HAQ: Health Assessment Questionnaire; GDS: Geriatric Depression Scale; MNA: Mini-Nutritional Assessment Test. MNA-SF: Mini-Nutritional Assessment Test-Short Form.

P-095

The Relationship between Disease Activity and Visceral Fat in Patients with Rheumatoid Arthritis

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Introduction. Rheumatoid arthritis (RA) is a chronic, inflammatory and autoimmune disease which has a long treatment period. Disease modifying drugs and biological agents are the treatment of choice. Various patient characteristics affect the response to the biological therapy. Previous studies demonstrated that biological therapy is less effective in obese patients due to the unfavorable metabolic and inflammatory effects of visceral fatty tissue.

Objectives. The aim of this study was to determine the effects of visceral fatty tissue on RA patients treated with biological therapy.

Methods. A hundred and one RA patients who had been followed at rheumatology outpatient clinics and 45 healthy volunteers were enrolled in the study. Total body fat percentage (%) and visceral fat percentage (%) was calculated by OMRON BF 508 (bioimpedansemeter technique). Patients were diagnosed according to ACR 1987 Rheumatoid Arthritis criteria. After physical examination and culprit joint detection DAS 28 was calculated and disease activity was determined according to DAS and VAS.

Results. Thirty (29.7%) of RA patients were on anti-TNF, 63 (62.3%) were on DMARD, and 8 (7.9%) of them were not using any drug. There was no significant difference in terms of BMI between groups (*p*=0.057). RA patients were subgrouped according to the used treatment modality. Total fat content was found to be 43.1, 38.5 and 36.9 in anti-TNF, DMARD and control group, respectively. In terms of total fat content, there was significant difference between anti-TNF and control groups (*p*=0.031). Mean visceral fat content was found to be 11.1, 8.6 and 8.9 in anti-TNF, DMARD and control group, respectively. Visceral fat ratio of anti-TNF group was significantly higher than control and DMARD group (*p*=0.018 and 0.003).

Conclusions. Visceral fat ratio was significantly higher in patients with RA. With the usage of anti-TNF both total and visceral fat contents were increased which may cause the blunted effect of biological therapy in RA patients.

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Keywords. Rheumatoid arthritis, visceral fat, body mass index, anti-TNF therapy.

P-096

Tocilizumab Efficacy in Infliximab and Methotrexate Resistant Still's Disease

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P-097

Prevalence of Metabolic Syndrome in Patients with Rheumatoid Arthritis: A Cross-Sectional Study of 50 Cases

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Introduction. Metabolic syndrome (MetS), also known as syndrome X and insulin resistance syndrome, was first described in 1988. It is a cluster of classical cardiovascular (CV) risk factors (obesity, glucose intolerance, dyslipidemia, and hypertension), the combination of which is thought to be associated with CV risk. The aim of this study was to assess whether the MetS was prevalent in a group of RA patients.
Patients and Methods. A total of 50 patients were included with the diagnosis of rheumatoid arthritis meeting ACR 1987 criteria between January 2013 and February 2014. The definition of MetS that has been used is that of the International Diabetes Federation 2005.
Results. The average age was 58 years [26- 77]. The sex ratio was 0.13. The average disease duration was 10 years [1-36]. The average value of the DAS 28 was 4.23 (2.05 to 7.1). Joint deformities were reported in 60% of cases. Extra-articular manifestations were reported in 40% of patients. Radiological destruction was observed in 86% of cases. Rheumatoid factor, ACPA, and Anti Nuclear antibody were reported in 86%, 88% and 14% of the cases respectively. All patients received corticosteroids and 90% received methotrexate. The most prevalent comorbidities in this population were obesity (52%), osteoporosis (42%), anemia (34%), hypertension (20%), and diabetes (16%). Metabolic syndrome was reported in 42% of cases. We didn't found significant correlation between the presence of metabolic syndrome and the age, sex, ESR, CRP, DAS28 and the radiological involvement.
Conclusion. In literature, obesity, higher systemic inflammatory markers, and glucocorticoids use are independent predictors associated with the presence of metabolic syndrome in patients with rheumatoid arthritis. These findings suggest that physicians should screen for metabolic syndrome in patients with rheumatoid arthritis to control its components and therefore reduce the risk of cardiovascular disease in these patients.
Keywords. Rheumatoid arthritis, metabolic syndrome, insulin resistance, diabetes.

P-098

Cardiovascular Risk in Patients with Rheumatoid Arthritis

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Introduction. Mortality in rheumatoid arthritis is doubled when compared to the general population. This excess in mortality can be explained in half of cases by cardiovascular events. It is mainly related to the chronic inflammatory condition that causes many metabolic disturbances. Other parameters such as treatments used in rheumatoid arthritis also play a role. We can evaluate the cardiovascular risk by using the Framingham Score. This score used information from the Framingham Heart Study to predict a person's chance of having a heart attack in the next 10 years. The aim of this study was to evaluate the cardiovascular risk in patients with rheumatoid arthritis.
Patients and Methods. A total of 58 patients were included with the diagnosis of rheumatoid arthritis meeting ACR 1987 criteria between January 2013 and February 2014. The calculation of the Framingham Score was performed and comorbidities were assessed for each patient.
Results. The average age was 56, 4 years [26- 77]. The sex ratio was 0.16. The average disease duration was 10 years [1to 36]. The mean value of the DAS 28 was 4.4 [2 to 7.7]. Rheumatoid factor, anti –CCP and anti nuclear antibody was reported in 82%, 79% and 13% of the cases respectively. All our patients received corticosteroids and 90% received methotrexate. The most prevalent comorbidities in this population were obesity (60%), osteoporosis (44,8%), anemia (34%), hypertension (24%), diabetes (17,2%) and metabolic syndrome was reported in 44,8 %. Half of patients (44,8%) of cases have a high cardiovascular risk (>10%). The increased cardiovascular risk was positively correlated with hypertension (p=0.004), metabolic syndrome and age over then 55 years.
Conclusion. There is an increased cardiovascular risk during rheumatoid arthritis. It should be possible to decrease cardiovascular morbidity and mortality by a strict control of the disease's activity. We should also take measures to combat other cardiovascular risk factors: as low a dose as possible for corticosteroid therapy, limited prescription of NSAIDs, encouragement of smoking cessation, regular lipid tests and prescription of statins treatment for hyperlipemia in accordance with current recommendations.
Keywords. Rheumatoid arthritis, cardiovascular risk, Framingham Score, mortality.

P-099

Effect of Treatment with Methotrexate and Adalimumab on Body Fat Mass and Adipokines Levels in Women with Early Rheumatoid Arthritis

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Actuality. The adipose tissue is an active endocrine organ that synthesizes adipokines (adiponectin, leptin, etc.). Patients with RA have the redistribution of adipose tissue (abdominal obesity). Dual-energy X-ray absorptiometry (DXA) is able to clarify body composition in patients with early RA and show a difference between fat mass (FM) and lean (muscle) mass (LM). The influence of anti-inflammatory therapy to body composition are discussed.
Aim. Evaluate whether methotrexate (MTX) and adalimumab (ADA) treatment has impact on body composition and adipokines in patients with early RA.
Material and Methods. The study included 28 women with early RA (criteria ACR / EULAR, 2010), 57 [46.5; 62.0] years old, with median disease duration - 6.0 [5.5, 15.5] months, seropositive for IgM RF and anti-CCP. All patients had a high RA activity (DAS28 5,5 [5,1; 5,9]; SDAI 32,4 [22,4; 41,7], CDAI 29,0 [19,7; 39,5]), never receiving glucocorticoids and DMARD therapy. All patients was assigned MTX 10 [10-15]mg/week, and 12 patients was added ADA 40mg/2 weeks after 12 weeks follow-up. The concentration of adiponectin and leptin in serum samples was determined by ELISA (Bio Vendor, Brno, Czech Republic and Diagnostics Biochem Canada Inc., respectively), body composition was measured by DXA with densitometer HOLOGIC (USA) at baseline and in 24 weeks.
Results. There were not significant differences in body mass index (BMI) and waist circumference (WC) in whole group (n = 28) after 24 weeks of treatment, but FM (23239.4 [18618.5;36765.1] vs 24273.4 [19405.0;35131.2]g), LM (40530.4[37641.7;48629.0] vs 41037.2[38339.5;48029.9]g) and leptin concentration (24.0[13.3;37.1]ng/ml and 31.5[15.9;54.3]ng/ml) increased, serum adiponectin levels reduced (20.5[14.5;43.2]ng/ml and 12.0[8.5;17.3]ng/ml) ($p<0.05$ in all cases). These trends did present in group of combined therapy (MTX +ADA, n=12): 31097.2[20664.9;42606.7]g vs 32375.6[23932.6;44966.4]g for FM ($p<0.05$) and 44413.1[38586,1;54114.4]g vs 45413.8[40208.2;53429.9]g for LM ($p<0.05$), the differences were not obtained in MTX monotherapy group (n=16). The FM was correlated with leptin levels in all treatment regimens (r=0,9 and r=0,91), with CRP - in only MTX group (r=0,58, $p<0.05$ for all). The adiponectin level was negatively correlated with BMI in patients receiving MTX (r=-0,53, $p<0.05$), but was not associated with FM, LM, CRP.
Conclusion. The combined therapy (MTX+ADA), but not MTX monotherapy, increased adipose and muscle tissue in patients with early RA after 24 weeks of treatment. The increase of FM was associated with raised leptin levels (proatherogenic adipokine).
Keywords. Rheumatoid arthritis, methotrexate, adalimumab, fat mass, lean mass, dual-energy X-ray absorptiometry, adipokines, leptin, adiponectin.

P-100

Anti-TNF Treatment Related Polyarthritis in a Rheumatoid Arthritis Patient: A Case Report

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P-101

Measure of Work Disability in Rheumatoid Arthritis by the Work Ability Index (WAI)

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Introduction. The impact of rheumatoid arthritis (RA) on work is an area of increasing research interest and a growing number of outcome measures to quantify such impact have become available in recent years. The Work Ability Index (WAI) is one of these measures. The aim of this study was to assess the availability of the WAI to measure work disability among patients with RA.
Patients and Methods.
We identified 50 patients diagnosed with RA. The Work ability Index (WAI) is determined on the basis of the answers to a series of questions which take into consideration the demands of work, the worker's health status and resources. The worker completes the questionnaire before the interview with an occupational health professional who rates the responses according to the instructions. WAI is a summary measure of seven items (range 7–49).
Items Range:
1. Current work ability compared with the lifetime best 0–10;
2. Work ability in relation to the demands of the job 2–10;
3. Number of current diseases diagnosed by a physician 1–7;
4. Estimated work impairment due to diseases 1–6;
5. Sick leave during the past year (12 months) 1–5;
6. Own prognosis of work ability 2 years from now 1–7;
7. Mental resources 1–4.
Results. The mean age of the study population was 48.14±8.13 years, ranging from 29 to 64 years. The mean duration of the disease was 12.12±8.53 years (2-34). Forty-four patients (88%) have a social security cover and 6 patients did not. The majority of workers with RA belong to the clothing industry (34%) of which 100% is women. The education sector is found in 10% of cases; trade in 8% of cases. The mean duration of employment is 30.22 years for males against 18.41 years for women. Physical job are found in 45 cases (90%). Half of the study population stopped working because of illness. The loss of work was found in 12 cases (48%); it is voluntary in 11 cases (44%) and following a redundancy in 1 case (4%) after mean disease duration of 63.83 months. An invalidity was found in 7 cases (28%) after mean disease duration of 99.57 months. An outplacement was found in 8 cases (16%). Extra-articular manifestations were more frequents in patients who stopped their work in 11 cases (44%). The majority of patients had very active RA at diagnosis (48%). 48% of patients stop occupation belonged to this category. The mean value of the WAI was 28.16±8.28 with extreme going from 8.5 to 44. The WAI allowed classifying workers with RA into 4 categories shown in the table below:

Table. Distribution of RA patients into categories based on Work Ability Index.

Work Ability Index	Number (%)
Weak	12 48%)
Moderate	8 (32%)
Acceptable	4 (16%)
Excellent	1 (4%)
Total	25 (100%)

Conclusion. The WAI has good potential. Establishing clinical parameters will be helpful for clinical interpretability. Overall, the current diversity of available measures in this field is impressive. While the availability of a wide range of instruments can provide users with many options, some care is important when selecting an outcome to meet the needs of a particular research study or clinical purpose.
Keywords. Rheumatoid arthritis, Work disability, absenteeism.

P-102

Symptomatic Osteonecrosis of the Bilateral Femoral Head in a Patient Treated with Cyclosporine

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P-103

Nutritional Evaluation of Patıents with Rheumatoid Arthritis

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Background. Rheumatoid arthritis (RA); of unknown etiology, which involves joints and watch with disfigurement, chronic, inflammatory, multisystem disease. Discussed in the group of autoimmune diseases and environmental, genetic, hormonal factors presumed to occur by the interaction of a disease. Among the environmental factors involved in the pathogenesis of dietary habits and trends of these patients, follow-up and treatment of disease is important in terms.
Objectives. Our aim in this study of patients with rheumatoid arthritis disease activity of eating habits and these habits (DAS) is to investigate the effect.
Methods. In this context Bezmialem Foundation University physical medicine and rehabilitation department depends on the rheumatology department refer to the ACR-2010 rheumatoid arthritis criteria based on the diagnosed 54 diagnose the patient nutritional status related forms creating a face to face interview method were filled. This form of patient demographics, disease activity, smoking and alcohol use, concomitant diseases, disease duration, and nutritional status questionnaire was completed on.
Results. In cases of water consumption, salt, fast food, eggs, milk, yogurt, cheese, wheat, cereal, whole wheat bread, white bread, butter, margarine consumption was recorded. Patients with food consumption was no correlation between the DAS (p>0.050).
Conclusion. Further studies with comparison groups and larger samples are needed to explore the promising results of this study before any cause and effect relationship can be determined.
Keywords. Rheumatoid arthritis, diet, rheumatoid arthritis diet.

P-104

Neutrophil-Lymphocyte Ratio in Patients with Rheumatoid Arthritis

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Objectives. Neutrophil-lymphocyte ratio (NLR) in peripheral blood has a prognostic value in diseases in which inflammation plays major role. It was aimed to evaluate the relationship between peripheral NLR and disease activity and also prognosis in patients with rheumatoid arthritis (RA).
Methods. Forty-three patients with RA (female / male: 31/12; mean age 54+11years; mean disease duration 41±29 months) who met ACR classification criteria were studied. The patients had at least 6 months of follow-up period. Complete blood count (neutrophil, and lymphocyte count), erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) levels were measured. The values of the same parameters of the time of diagnosis (treatment not started yet) were recorded from patient's files. NLR was calculated by dividing the absolute neutrophil count by the absolute lymphocyte count. As prognostic markers activity of disease (by disease activity score 28 - DAS 28), daily life activity of patient

(by health assessment questionnaire - HAQ) and presence of joint deformity (by physical examination) were evaluated at the time of study. Patients with infectious disease, major surgery, severe trauma, malignant disease and serious cardiovascular disease at the time of diagnosis time and / or during the assessment period or within 1 month prior to assessment were excluded from study.
Results. Mean NLR was 2,44±1,03 (0,99-6,8) and 2,59±1,47 (1,31-9,2) at the time of diagnosis and study, respectively (p=0,571). Mean DAS 28 was 3.64±0.85 and mean HAQ score was 0.90±0.80.
There was no relationship between mean NLR of diagnosis time and mean DAS and HAQ score (p value was 0,32 and 0.79, respectively).
Seven (16%) patients had deformity. Mean NLR of patients without deformity was 2,55±1,53; it was 2,77±1,25 in patients with deformity (p=0,727). Patients without deformity had mean NLR as 2,34±0,81 at the time of diagnosis; it was 2,98±1,76 in patients with deformity (p:0,133).
Patients were divided into two groups in terms of disease activity; patients with low disease activity (DAS 28<3.2)(14 (33%) patients) and patients with moderate-high disease activity (DAS 28 >=3,2) (29 (67%) patients). Mean NLR at time of diagnosis was 2,53±1,14 and 2,26±0,72 in patients with moderate-high disease activity and low disease activity, respectively (p:0,425). Mean NLR at the time of study was 2.78±1,71 and 2,19±0,70 in patients with moderate-high disease activity and low disease activity, respectively (p:0,228). There was a weak correlation between mean NLR and mean CRP level at the time of diagnosis (p=0.033, r=0,343).
Conclusions. There was no association between NLR and disease activity and prognosis according to parameters we assessed in patients with RA. There was an association only between NLR and CRP at the time of diagnosis. More studies are needed to evaluate the role of NLR in assessing disease activity and predicting prognosis of RA.
Keywords. Neutrophil-lymphocyte ratio, rheumatoid arthritis, disease activity.

P-105

Household Work Disability of Moroccan Housewives with Rheumatoid Arthritis

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Objective. There have been few studies on the impact of rheumatoid arthritis (RA) on the work of the household. Our study aims to evaluate the impact of rheumatoid arthritis (RA) on women in Moroccan home.
Materials and Methods. Demographic data, clinical and biological characteristics of the disease were collected. Depression was assessed by HAD questionnaire (Hospital Anxiety and Depression Scale). Working from home has been assessed by a multiple choice questionnaire (1) (no problems, some problems, many difficulties and disabilities) on the following items: the ability to do household chores, cleaning the house, washing floor, washing the dishes, cooking, and caring for children and husband. Women who failed to achieve at least one household activity were considered unable to domestic work and they were compared to those who have no such disability. Univariate and multivariate logistic regression was performed to identify factors associated with this disability for domestic work.
Results. 90 women (mean age 49.7±11.4 years) with Rheumatoid arthritis were included. The disease's median duration was 8 years [4,14], the median of DAS28-ESR was 4.27±1.75 and median of HAQ was 0.5 [0, 1, 37]. The inability to domestic work was found in 31 patients (34.5%), this inability related to the following items: do household activities (23.3%), clean the house (26.7%), wash the floor (34.4 %), caring for children and husband (14.4 %), washing dishes (26.7%) and cook (17.8%). In univariate analysis the inability of domestic work was associated with high disease activity (OR=2.23, p<0.0001), a significant pain intensity (OR= .03, p=0.001), with morning stiffness prolonged (OR=1.015, p=0.005), a significant functional impairment (OR=7.25, p<0.0001) and depression (OR=1.09, p=0.003). After multivariate analysis, factors that remained significantly associated with the inability of domestic work were higher HAQ (OR=6.72, p<0.0001) and DAS28 - ESR increased (OR=2.05, p=0.003).
Conclusion. We conclude that RA is highly predictive of homemaking disability in moroccan women, especially those with active RA and significant functional impairment.
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Keywords. Household word disability, housewives, Rheumatoid arthritis.

P-106

Physical Activity in Moroccan Patients with Rheumatoid Arthritis

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Objective. The purpose of this study was to identify physical activity behaviors of Moroccan patients with RA and her associations with RA demographic and disease related variables.
Methods. A cross sectional study was conducted in 103 RA. Socio-demographic characteristics and Disease specific variables were documented. Disease activity was measured with Disease Activity Score 28 (DAS28), quality of life was assessed with rheumatoid arthritis impact disease (RAID), fatigue was evaluated by fatigue Visual Analogic scale and Health Assessment Questionnaire (HAQ) was completed by all patients. Physical activity was evaluated with the Arab version of the International Physical Activity Questionnaire (IPAQ) short version.
Results. A total of 90 women and 13 men with RA participated in this study. Mean age of participants was 49.7±11.4.disease duration was a median of 8.16 years [3,25-14,16]. Total amount of physical activity was a median of 1873 (346-4053) MET-minute/week. However in 30.8% the physical activity was low. In univariate analysis lower physical activity (IPAQ) correlated with higher disease activity (β=-0.36;CI95%[-899—300]; p<0,001); poor functional capacity (β=-0.41; CI95%[-2146—845]; p=0·001); higher fatigue levels (β=-0.22; CI95%[-43;-3]; p=0,02) and poor quality of life (RAID) (β=-0.27; CI95%[-610;-107] p=0,006). No relationship was found between PA, age, disease duration and BMI. After multivariate analysis HAQ (β=-0.43;CI95%[-2584;-592]; p=0.002) and DAS28(β=-0.36;CI95%[-215-853]; p=0.02) still strongly associated with PA.
Conclusion. This study suggested that lower physical activity associated with high disease activity and poor functional capacity. To date measures of Physical activity have been infrequently utilized in this population. Replication of our finding will further justify measuring PA in patients with RA in rehabilitation research and clinical practice.
Keywords. Physical activity, Rheumatoid arthritis, Moroccan.

P-107

Atherosclerosis in Rheumatoid Arthritis: Predictive Factors

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Introduction. Rheumatoid arthritis (RA) is a systemic inflammatory disease associated with an increased cardiovascular risk not related to traditional risk factors. The major contributing factor to increased cardiovascular risk is premature and accelerated atherosclerosis, a common complication of autoimmune diseases.
Objective. To estimate the role of traditional risk factors and other risk factors, in prediction of subclinical atherosclerosis in patients with rheumatoid arthritis.
Material and Method. We performed a retrospective study which included 113 patients with RA, diagnosed in according to ACR/EULAR 2010 criteria. Atherosclerosis has been evaluated using the carotid intimae-media thickness (IMT), which was measured at the common carotid artery, using B-mode ultrasound. A value bigger than 0.80mm, it was considered pathologic. Traditional risk factors (hypertension, smoking, sex, age, cholesterol) were used in determining cardiovascular risk (Framingham Score - SF) and prediction of early atherosclerosis - IMT. Laboratory evaluation included antinuclear antibodies (ANA), anticardiolipin antibodies (ACA), anticyclic citrullinated peptide antibodies (CCP) by ELISA method.
Results. 17% of the patients were male and 83 % were female, mean age 54±11,76SD (years), mean disease duration of 6,23±5,14SD (years). Antibodies positivity was identified as following: 88% for CCP, 30% for ACA, 36,8% for ANA. IMT mean value (mm) was 0,84±0,19 SD. For men IMT mean value (mm) was 0,96±0,26SD, and for female was 0,82±0,17SD. We found correlations between traditional risk factors in predictions IMT index with r=0,70 (r2=0,49), while for SF was r=0,84 (r2=0,74). Antibodies were correlated with subclinical atherosclerosis as following: for ANA p=0.001 and for ACA p=0,007 but not for CCP p=0,15.
Conclusions. In patients with RA, the necessity of ANA and ACA antibodies measurement must be emphasized since it seems that they can be used in pre-

dictive estimate of atherosclerosis. Traditional risk factors are important to be evaluating for predicting cardiovascular risk.

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Keywords. Rheumatoid arthritis, atherosclerosis, intimae-media thickness, cardiovascular risk, antibodies.

P-108

Determining MEFV Gene Mutations and Relationships with Disease Activity in Patients with Ankylosing Spondylitis

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Objective. Ankylosing spondylitis (AS) is a common inflammatory rheumatic disease characterized by sacroiliac joint and axial skeletal involvement The aim of this study is to assess presence of MEFV (MEditerranean FeVer) gene mutations and relationship between those mutations and disease activity in ankylosing spondylitis (AS).
Method. Study group was consisted of 34 patients with AS, and 35 healthy volunteers enrolled to study as control group. 12 MEFV gene mutations were screened by Stripe-Assay technique. Patients with AS were divided into 2 subgroups according to whether they are MEFV gene positive or negative. Demographic data of study group were questioned. Bath Ankylosing Spondylitis Disease Activity Index (BASDAI), Bath Ankylosing Spondylitis Functional Index (BASFI) and The Bath Ankylosing Spondylitis Metrology Index (BASMI), peripheral joint involvement, and drug use were used as clinical parameters; Visual Analog Scale (VAS) was used to assess pain, and erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) were assessed as laboratory parameters. Results: Among 34 patients with AS, it was found that 5 patients (35.7%) were positive for E148Q, 2 patients (14.2%) for M694V, 2 patients (14.2%) for A744S, 2 patients (14.2%) for V726A and 1 patient (7.1%) for each of the M680I, R761H, P369S. Among 35 individuals in control group, E148Q was detected in two (5.7%) and M694V was detected in another two (5.7%). When MEFV gene mutations were compared between study group and control group, there was no significant difference (p>0.05). Of 14 AS patients with positive MEFV mutation, E148Q was detected in 7 patients (50.0%) and M694V was detected in 4 patients (28.6%) and these rates were found as statistically significant (p<0.05). There was significant difference between MEFV carriers and non-carriers regarding BASDAI, CRP and ESR values and positive family history whereas no difference was found in BASMI, BASFI, VAS, disease duration and biological agent use.
Conclusions. It was thought that MEFV mutation frequency in AS patients was similar with control group but disease should have more progressive course in MEFV positive AS patients. To address this issue, further studies with large series are needed.

Keywords. Anklyosing Spondylitis, MEFV Gene Mutations, Disease Activity.

Table I.

	MEFV positive (n=14) Mean ± SD	MEFV negative (n=20) Mean ± SD	*p*
BASDAI	5.12 ± 1.27	3.05 ± 1.34	p=0.001
BASMI	5.35 ± 2.37	4.11 ± 2.45	p=0.186
BASFI	3.85 ± 2.16	3.76 ± 1.78	p=0.986

When the BASFI and BASMI values were compared between patients with and without MEFV mutations, no significant differences were found (p=0.186 and p=0.986, respectively). But there was a statistically significant difference in BASDAI (p=0.001). Comparisons of BASDAI, BASFI, and BASMI values between patients with and without MEFV mutations were presented in Table I.

P-109

Ultrasound Active Synovitis Can Be Predicted By Using Clinical Measures

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Background. Studies have shown discrepancies between clinical and ultrasound (US) measures in rheumatoid arthritis (RA) patients, with US assessment being more sensitive in detecting joint synovitis.
Objectives. To determine if clinical measures can predict the presence and severity of ultrasound synovitis in RA patients.
Methods. 54 consequently RA patients treated with biologic were prospectively recruited. Clinical, demographic and serological data were analyzed. Disease activity was assessed by DAS28-ESR score and remission was defined as a DAS28-ESR<2.6. Bilateral wrist, 1-5 metacarpophalangeal (MCP) and 1-5 proximal interphalangeal (PIP) were examined and synovial hypertrophy (SH) and PDUS signal were scored. Active synovitis was defined as more than two SH and a PDUS signal; if any assessed joint met these criteria, the patient was classified as having active synovitis. Clinical, serological and US measures were compared between the two groups (patients with or without active synovitis) using independent difference tests (t-Student, Mann Whitney test). Binomial logistic regression and ROC curve were used for these parameters to determine their efficacy in predicting the presence of active synovitis
Results. The study included 54 patients, of whom 47 (87%) were women, with a mean age of 58.35±13.06 and a mean DAS28-ESR of 3.47±1.38. 40 patients (74.1%) had active synovitis. Only 25.9% were in clinical remission and among them 42.85% had ultrasound active synovitis. Patients with ultrasound active synovitis had higher swollen joint count-SJC (p=0.028), higher visual analogue scale score-VAS (p=0.028) and higher DAS28-ESR score (p=0.013), but there wasn't a significant difference regarding the inflammatory syndrome-ESR (p=0.203), CRP (p=0.362).Clinical predictors for active synovitis were DAS28-ESR score (OR=1.961, p=0.022), VAS (OR=1.035, p=0.043) and SJC (AUROC=0.760, p=0.020). Ultrasound predictors for active synovitis were PDUS score in right wrist (AUROC=0.897, p<0.001) and left wrist (AUROC=0.886, p<0.001) and SH score in right wrist (AUROC=0.672, p=0.05) and left wrist (AUROC=0.683, p=0.044). However, the combination of these clinical measures, analyzed in a model by multivariate logistic regression, did not have a statistical significance (R2=0.215, p=0.499).
Conclusions. Ultrasound active synovitis can be predicted using routine clinical measures. Disease activity (expressed by composite scores as DAS28), clinical parameters such as SJC or patient's perception on the disease (VAS) can be used to identify patients likely to have active synovitis, thus requiring US assessment. When assessing active synovitis, US should be performed particularly on both wrist (gray scale and PS).

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Keywords. Ultrasound, active synovitis, Power Doppler, clinical remission.

P-110

The Incidence of Anemia in Rheumatoid Arthritis

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Rheumatoid arthritis (RA) is a chronic and inflammatory disease. Anemia is common in RA.108 RA and 25 healthy controls were enrolled in the study. In this study, in the patients and control group, complete blood count, reticulocyte ratio, peripheral blood smear, erythrocyte sedimentation rate, serum iron, total iron binding capacity, ferritin, direct Coombs test, vitamin B12, folic acid and erythropoietin levels, antiparietal antibody (APA), anti-intrinsic factor antibody (AIFA) and fecal occult blood tests were examined.
Results. Anemia was found in 60% of RA patients (anemia of chronic disease 35%, iron deficiency anemia 25.9%, thalassemia minor 2.7%, and megaloblastic anemia 0.9%). The direct coombs test was negative in all RA patients. Vitamin B12, Folic acid, APA and AIFA positivity was indistinguishable between the

two groups. EPO levels were not different in all patients with or without anemia (p>0.05). In RA patients with anemia, EPO levels were significantly higher than the healthy control group (p=0.01).
Conclusions. Anemia in RA patients may be due to different reasons, and these patients should be carefully evaluated all the time, should be followed.
Keywords. Rheumatoid arthritis, anemia, chronic and inflammatory disease.

P-111

Clinical Remission in Rheumatoid Arthritis Can Be Predicted by Using Power Doppler, But not Gray Scale Ultrasound Assessment

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Background. Ultrasound (US) assessment has greater sensitivity than clinical assessment in detecting synovitis in rheumatoid arthritis (RA) patients. Recently, US techniques have revealed that a significant percentage of patients classified as being in clinical remission exhibit different grades of synovitis, and a subgroup of these patients suffer flares and/or joint damage during follow-up.
Objectives. to determine which ultrasound parameters can predict clinical remission in RA patients on biologic regime therapy.
Methods. 54 consequently RA patients treated with biologic were prospectively recruited. Clinical assessment included: swollen joint count (SJC), tender join count (TJC). ESR, CRP, RF and ACPA were also determined and bilateral wrist, 1-5 MCP (metacarpophalangeal) and 1-5 PIP (proximal interphalangeal) gray scale (GS) and Power Doppler (PD) ultrasound was performed. Disease activity was assessed by using DAS28-ESR score and remission was defined as a DAS28-ESR score less than 2.6. Clinical, serological and US measures were then compared between the two groups (patients in clinical remission and patients with active disease) using independent difference tests (t-Student, Mann Whitney test). Binomial logistic regression and ROC curve were used for these measures to determine their efficacy in correctly classifying remission and non-remission state disease.
Results. Among the patients included in the study, there were 47 (87%) women, with a mean age of 58.35±13.06. Mean DAS28-ESR was 3.47±1.38, and only 25.9% were in clinical remission. There were no significant differences between the two groups (remission vs non-remission) regarding age, sex, disease duration, type of biologic, use of corticosteroids, RF and ACPA levels or the number of joints with GS-US synovitis (GSJC). Patients in clinical remission had a lower number of joints with PDUS (PDJC), p=0.002, and a lower PD score in right wrist (p=0.027), left wrist (p=0.015) and left second MCP (p=0.004). The most important predictors for remission state disease were: PDJC (OR=0.433, p=0.005, AUROC=0.799, p=0.002), PD score in right wrist (OR=0.449, p=0.049, AUROC=0.689, p=0.036) and left wrist (OR=0.400, p=0.038, AUROC=0.708, p=0.021).
Conclusions. Clinical remission in RA patients can be predicted using ultrasound assessment. Only PD assessment, specifically performed on both wrists, can identify patients in clinical remission.
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Keywords. Rheumatoid arthritis, clinical remission, ultrasound assessment, Power Doppler.

P-112

How Could Be Used the Autoantibodies Against Anti-TNF Agents in Clinical Practice? Two Years Follow-Up Study

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Background. Immunogenicity is one of the major causes for non-responding to anti-TNF treatment, and recently different anti-drug antibody (ADA) ratios for different diseases were reported. Therefore there is not generally recommended guidelines to investigate the immunogenicity in inflammatory diseases. The ADAs, drug levels and the clinical progress of patients with ADA after 2 years follow-up period were investigated.
Method. Serum levels of anti-infliximab, adalimumab and etanercept ADAs and drug levels were obtained by ELISA in ankylosing spondylitis (AS) patients (n=72, mean age:40.3±10.0) and rheumatoid arthritis (RA) patients (n=24, mean age:46.2±11.5).
Results. Five of the infliximab treatment received AS patients (n=46) had ADA positivity, one of them had infusion reaction. The other four patients were good responder but one of them had resistance against infliximab after 11 months. The infliximab levels of ADA positive patients were undetectable. None of AS patients (n=26) under etanercept therapy had ADA. In adalimumab receiving patients the drug levels of ADA carrying patients were different, also these antibodies were non-neutralizing Ab. The statistically significant median levels of antibody detecting time was found as 38 months in infliximab receiving patients and 6 months in adalimumab receiving AS patients (p=0.05). RA patients (n=12) receiving infliximab therapy, ADA detected in 2 of them and one of them had a good response. The drug levels of ADA carrying patients were p<0.05, also these autoantibodies were neutralizing Ab. RA patients (n=15) receiving etanercept, no ADA has been detected. TNF response in RA patients, there was no significant difference when compared between infliximab & etanercept and infliximab & adalimumab therapy (p=0.93 and p=0.65, respectively). The ADA levels between adalimumab and infliximab there was also no significant difference (p=0.603) obtained. The median levels of antibody detecting time was found 12 months in infliximab receiving RA patients and 7.5 months in adalimumab receiving RA patients and the difference was not significant (p=0.121).
Conclusion. The ADA and drug level analysis could be useful in decision-making about the choice of treatment for non-responder patients. It is needed the standardization of the methods for analyzing immunogenicity.
Keywords. Anti-TNF agents, rheumatoid arthritis, ankylosing spondylitis.

P-113

Comparative Efficacy of Injection and Tablet Methotrexate Forms in Rheumatoid Arthritis Treatment

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Aim. To evaluate the efficacy and tolerability of methotrexate in rheumatoid arthritis (RA) therapy, depending on the route of administration.
Materials and Methods. 23 patients were included in study group (19 women, 4 men) with moderate (47.8%) and high RA activity (52.2%), receiving methotrexate subcutaneously in a dose of 10 -15 mg 1 time per week: 11 patients were switched from methotrexate tablet form, 2 patients received leflunomide previously, 10 patients received methotrexate initially. Comparison group - 20 patients (17 women, 3 men) taking methotrexate (10 -15 mg / week) in tablets. The groups were comparable on key parameters. Effectiveness evaluation (ACR and EULAR criteria) and tolerability of treatment was carried out every 4 weeks for 6 months.
Results. Significant clinical and laboratory improvement (ACR 20) was achieved in 23 patients (main group) and in 14 patients - the control group. The appearance of the first effect (ACR 20) of methotrexate subcutaneously was observed after 2 weeks of treatment in 8 (34.8%), one month therapy - 17 (73.9%) patients, in the control group at 2 weeks - in 1 (5%), after 1 month at 7 (5%) patients respectively. After 6 months of methotrexate subcutaneously treatment decrease in activity (ΔDAS28ESR 2,3±0,9, initial DAS28ESR 5,3±2,9) corresponds to good effect, and treatment was significantly (p<0.05) better compared to the group receiving methotrexate in tablet form (ΔDAS28ESR 1,3±1,0, initial DAS28ESR 5,2±2,6). Adverse events occurred in 5 (21.7%) patients of the main group (alopecia, itching at the injection site, increased transaminases less than 1.5 normal) did not require discontinuation of the drug, in the control group - in 11 (55%)

patients: dyspepsia, alopecia, increased transaminases, 2 (10%) patients refused from therapy.
Conclusion. Subcutaneous administration of methotrexate in RA patients demonstrated more rapid and pronounced effect, better tolerability compared with taking the drug inside.
Keywords. Methotrexate, Subcutaneous, RA.

P-114

The Prevalence and Treatment of Hypertension and Cardiovascular Disease in Patients with Rheumatoid Arthritis in the Clinical Hospital Centre Rijeka

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Introduction. The prevalence of arterial hypertension (AH) in patients with rheumatoid arthritis (RA) is more than 50% and represents an independent cardiovascular risk factor. Polypharmacy in the treatment of RA contributes to developing of AH, notably the use of glucocorticoids, leflunomide, cyclosporine and nonsteroid anti-inflammatory drugs (NSAIDs).
Objective. To determine the prevalence of AH and cardiovascular disease in patients with RA in the Clinical Hospital Centre Rijeka and to identify and compare the treatment of AH as recommended by NICE (National Institute for Health and Care Excellence) from the 2006th year in this group of patients.
Methods. We included 126 RA patients hospitalized in the Department of Internal Medicine 2009th to 2013th year and compared them with 126 consecutive outpatients. AH is defined as blood pressure >= 140/90 mmHg or already existing antihypertensive therapy. We analyzed age, sex, treatment with glucocorticoids, disease - modifying antirheumatic drugs (DMARDs) and biologic therapy. We established cardiovascular disease and antihypertensive therapy. NSAIDs were not analyzed, because of their occasional use.
Results. Out of 126 hospitalized RA patients (77% female) mean age 65±12 years, 56% had hypertension, among them only 20% were under the age of 60 years. Out of 126 outpatients (88% female) mean age 59±13 years, only 24% had hypertension. Hospitalized patients had heavier disease and longer disease duration. Hypertensive patients had received glucocorticoids 75%, DMARDs 80% (methotrexate 70%, leflunomide 9%) and biologic drugs 13% (tocilisumab, rituximab, etanercept, adalimumab). Cardiovascular diseases were found in 44% of hypertensive patients with RA, mostly ischemic heart disease, valvular disease, arrhythmias and stroke. For the treatment of AH the most commonly used were angiotensin converting enzyme inhibitors (ACEI) or angiotensin receptor blockers (ARBs) alone (68%) or in combination with hydrochlorothiazide (41%), beta blockers (57%) and calcium channel blockers (40%). 65% of hypertensive patients were receiving two or more antihypertensive drugs. Comparing hypertensive and normotensive patients with RA we found statistically significant difference in age (p<0.001).
Conclusion. The prevalence of AH and cardiovascular disease in elderly patients with RA is high. The most commonly used medications for RA in patients with hypertension are glucocorticoids and DMARDs. The most commonly used antihypertensive drugs in our population of patients with RA are ACEI or ARB, which is in line with recommendations from NICE 2006th year. However, we should pay more attention to our outpatients at screening for AH.
Keywords. Rheumatoid arthritis, hypertension, cardiovascular disease.

P-115

Thoracic Aortic Aneurysm in a Patient with Rheumatoid Arthritis

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P-116

Prevalence of Comorbidities in Turkish Patients with Rheumatoid Arthritis: Association with The Health-Related Quality of Life in Terms of Disease Activity, Functional and Radiological Status, Severity of Pain, and Social and Emotional Functioning

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Background. Rheumatoid arthritis (RA) is the most common inflammatory arthritis and is a major cause of disability (1). Comorbidities are common in patients with RA. Some comorbidities are associated with RA, while others are related to its treatment.
Objectives. The aim of our study was to investigate the prevalence of comorbidities in Turkish patients with RA and evaluate the impact of comorbidities on health-related quality of life (HRQoL) in terms of disease activity, functional and radiological status, severity of pain, and social and emotional functioning.
Methods. A total of 160 RA (131 females and 29 males) patients were included in the study. Comorbidities such as hypertension, dyslipidemia, diabetes mellitus, cardiovascular diseases, peptic ulcer, osteoporosis, thyroid disorders, depression, lung diseases and cancers were recorded. Disease activity was measured by using Disease Activity Score-28 (DAS28). Stanford Health Assessment Questionnaire (HAQ) was used for determining functional status, Nottingham Health Profile (NHP) for HRQoL, and the modified Sharp Score developed by Van der Heijde for radiological damage. Severity of pain was measured by using 10 cm Visual Analog Scale-Pain (VAS-pain).
Results. Comorbidities were noted in 107 patients (66.88%). The most common was peptic ulcer (50 patients, 31.25%). This was followed by osteoporosis (34 patients, 21.25%), dyslipidemia (25 patients, 15.63%), depression (24 patients, 15%), hypertension (22 patients, 13.75%), diabetes mellitus (21 patients, 13.13%), thyroid disorders (13 patients, 8.13%), lung diseases (11 patients, 6.88%), cardiovascular diseases (10 patients, 6.25%), and cancers [5 patients (1 breast cancer, 1 malign melanoma, 3 lung carcinoma) 3.13%], respectively. Patients with comorbidities scored significantly higher in DAS28, HAQ, VAS-pain, and pain, energy and physical mobility subgroups of NHP (p<0.05). It was not recorded any statistical significant difference in sleep, social isolation and emotional reactions subgroups of NHP between the patient groups with and without comorbidities (p>0.05). There was no association between the presence of comorbidities and radiological damage (p=0.23) (Table I).
Conclusions. Comorbidities frequently occur in patients with RA and are associated with more active and severe disease and functional impairment. They have negative impact on HRQoL. Therefore, comorbidities should be detected and taken into consideration in the choice of medical treatment.
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Keywords. Comorbidity, rheumatoid arthritis, quality of life.

Table I.

	Comorbidities present (n=107)	Comorbidities absent (n=53)	p value
DAS28	3.53 ± 1.32	2.96 ± 1.38	0.012*
HAQ	1.02 ± 0.73	0.54 ± 0.73	0.00**
Modified Sharp Score	41.09 ± 59.54	28.91 ± 62.26	0.23
VAS-pain	4.87 ± 3.04	2.56 ± 2.53	0.00**
NHP-pain	38.56 ± 31.36	20.96 ± 1.38	0.001**
NHP-physical mobility	36.09 ± 22.21	21.69 ± 23.27	0.00**
NHP- energy	49.66 ± 40.04	32.07 ± 39.33	0.012*
NHP- sleep	30.74 ± 32.92	26.41 ± 30.01	0.42
NHP-social isolation	14.76 ± 24.62	13.21 ± 25.09	0.71
NHP-emotional reactions	28.15 ± 32.67	20.99 ± 33.85	0.19

The relation between presence of comorbidities and clinical and radiological parameters *: p<0.05 (significant), **: p<0.01 (highly significant)

P-117

Disease Activity (Rheumatoid Arthritis Disease Activity Index -5) in Turkish Patients with Rheumatoid Arthritis: Association with Quality of Life, Pain, Fatigue, Functional and Psychological Status

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Background. Rheumatoid arthritis (RA) is a chronic, inflammatory disease characterized by chronic inflammation of the synovial joints leading to progressive joint destruction. Disease activity reflected by tender and swollen joint counts, levels of acute phase reactants, and patient's and physician's global assessments, is an outcome measure, which is used to evaluate health outcome in clinical studies of patients with RA (1). Disease activity scales used in RA are long, tedious, and may interfere with the flow of patient visits rather than contributing information to clinical care. For busy clinical settings, Leeb developed a simplified version of the Rheumatoid Arthritis Disease Activity Index (RADAI) questionnaire, RADAI- 5 (2). Its adaptation to Turkish language was proven by Sunar *et al*. (3).
Objectives. The aim of our study was to determine disease activity in Turkish RA patients, to evaluate association between disease activity, measured with RADAI-5, and quality of life, pain, fatigue, functional and psychological status.
Methods. A total of 100 RA (81 females and 19 males) patients were included in the study. Quality of life (QoL) was evaluated by using Rheumatoid Arthritis Quality of Life Scale (RAQoL). Stanford Health Assessment Questionnaire (HAQ) was used to evaluate functional status. Psychological status was assessed by using Beck Depression Scale (BDS), fatigue by Fatigue Severity Scale (FSS). Disease activity was measured by using Disease Activity Score–28 (DAS28) and RADAI-5.
Results. Mean RADAI-5 score was found as 4.29±2.38. Of the patients, 8% were in remission, 32% had mild disease activity, 31% had moderate disease activity, and 29% had high disease activity. RADAI-5 was strongly correlated with VAS-pain, DAS 28, FSS, RAQoL, BDS, and HAQ (r: 0.93, 0.82, 0.71, 0.70, 0.70 and 0.69, respectively) (p=0) (Table I).
Conclusions. High disease activity has a negative impact on QoL, physical and psychological functions and vitality. This is the first study analyzing the association between disease activity, and QoL, fatigue and depression levels, where disease activity was assessed by using RADAI-5. RADAI-5 is a short, practical questionnaire that can easily administered by the patient in a busy clinical practice setting. It can be used as a RA outcome measure to estimate the impact of the disease and evaluate health outcome in clinical studies.

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Keywords. Rheumatoid arthritis, disease activity, RADAI-5.

Table I.

	RAQoL	HAQ	VAS-pain	FSS	BDS	DAS28
RADAI-5 r	0.70**	0.69**	0.93**	0.71**	0.70**	0.82**
p	0.00	0.00	0.00	0.00	0.00	0.00

The relation between disease activity and QoL, functional status, pain, fatigue, and depression.

P-118

Effect of Treatment on Sleep Quality in Rheumatoid Arthritis

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The aim of this study is to evaluate sleep quality and fatigue in patients with rheumatoid arthritis (RA) and to investigate effect of treatment on these parameters. The study included 78 patients diagnosed as RA and 48 healthy controls. Pittsburgh Sleep Quality Index (PSQI) was used to assess sleep disorder, while Multidimensional Assessment of Fatigue Scale (MAF) was used to assess fatigue in both patients with RA and healthy controls. In addition, disease activity score 28 (DAS28) and visual analog scale (VAS) were used to assess disease activity and pain, respectively. The patients were stratified into 2 subgroups according to treatment received: group 1 received non-biological disease-modifying anti-rheumatic drugs (DMARDs) and group 2 received both non-biological and biological DMARDs. The mean total PSQI score was found as 8.46±3.90 in patient group, whereas 4.04±2.24 in control group. There was significant difference in mean total PSQI score between groups (p=0.001; t=8.023). The mean total MAF score was found as 28.25±13.43 in patient group whereas 20.16±11.05 in control group, indicating significant difference (p=0,001; t=3.668). There was also statistical significant in mean scores of all PSQI subscales between patient and control groups. When treatments received were considered, it was found that mean total PSQI score was 0.08±3.87 in non-biological DMARD subgroup and 7.60±3.89 in biological plus non-biological DMARD subgroup. Although it was lower in biological plus non-biological DMARD subgroup, there was no significant difference between subgroups (p=0.100; t: 1.665). Sleep quality and daytime functionality scores were found as 1.86±0.69 and 1.40±0.83 in non-biological DMARD group, whereas 1.54±0.66 and 0.84±0.93 in biological plus non-biological DMARD group, respectively. A significant difference was found between groups (p=0.043 and t=2.054; p=0.008 and t=2.730, respectively). MAF score was found as 30.94±13.91 in non-biological DMARD group, while 24.59±12.01 in biological plus non-biological DMARD group. A significant difference was found between groups (p=0.038; t=2.109). It was found that sleep quality and fatigue were poorer in patients with RA compared to healthy individuals. It was found that higher disease activity resulted in prolonged sleep latency, decreased daytime functionality and greater fatigue symptoms. It was seen that sleep quality, daytime functionality and MAF scores were better in patients received biological plus non-biological DMARD therapy when compared to those received non-biological DMARD therapy alone.
Keywords. Rheumatoid arthritis, sleep quality, fatigue, disease activity, RA treatment.

P-119

Assessment of Joint Inflammation By Ultrasonography (US) in Patients with Rheumatoid Arthritis (RA) in Clinical Remission

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The aim of this study is to investigate subclinical synovitis by Power Doppler Ultrasonography (PDUS) in patients with RA who are in clinical remission (DAS 28<=2,6).
Fifty-four patients with RA who are in clinical remission were enrolled in the study. Bilateral wrist, 2 and 3th metacarpophalangeal, 2 and 3th proximal interphalangeal joint, 2 and 5th metatarsophalangeal joints were assessed via PDUS. Handgrip strength was measured with a hand-held dynamometer. MHQ was evaluated over six domains including overall hand function, activities of daily living, pain, work performance, aesthetic and patient satisfaction with function each patient. Pain was evaluated with Visual Analog Scale (VAS).

Table I. Comparison of left and right handgrip strength in patients with synovitis and without synovitis.

	No synovitis	Synovitis	Result
Right handgrip strength	22,25 ± 11,63	13,96 ± 7,21	p=0.007
Left handgrip strength	19,96 ± 10,36	13,20 ± 10,32	p=0.005

In 37 of 54 patients, synovitis was detected via PDUS at least one joint. Mean DAS28 of patients with synovitis were significantly higher than the mean DAS28 of the patients without synovitis. A predictive value for determining the patients without synovitis was evaluated by ROC analysis and 1.88, a value that is below DAS28:2.6, was found. Hand grip strength were higher in patients without ar-

thritis (Table I). MHQ was significantly lower and VAS was significantly higher in patients with arthritis.
According to our results usage of PDUS is more sensitive than DAS28 in determining the remission in RA. If PDUS is not available hand grip strength and MHQ can be used to assess the subclinical activation.
Keywords. Rheumatoid Arthritis, Power Doppler Ultrasonography, Remission.

P-120

Correlation of RAPID3 (Routine Assessment of Patients Index Data 3), DAS28 (Disease Activity Score 28) and CDAI (Clinical Disease Activity Index) in Disease Activity and Effects of Education Level and Co-Morbid Diseases on this Assessment in RA

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Background. RAPID3 is an activity index based on only the patient's report in RA. It doesn't require joint counts and it isn't time consuming. Therefore this situation makes the index very attractive for physicians. It has been shown in clinical studies that RAPID3 gives correlated information with DAS28 and CDAI.
Objectives. In this study, we aimed to determine the correlation of RAPID3, DAS28 and CDAI in the assessment of disease activity and effects of education level and co-morbid diseases on this assessment in RA patients who were followed in a tertiary rheumatology clinic of Turkey.
Methods. 246 RA patients (80.1% female, mean age: 53.2±12.1 years) followed up for at least 3 months between January-June 2013 were included to the study. All patients were asked to fill out RAPID3 questionnaires. Uneducated patients completed the survey with the help of medical secretary. RAPID3, DAS28 and CDAI was calculated in all patients. Patients were subdivided according to disease severity as group A (remission-minimal disease activity) and group B (medium-severe disease activity) for all scoring systems. All data were analyzed using statistical software; SPSS for Windows 20 (SPSS Inc, Chicago, IL). One way Annova, Kruskal Wallis analysis, kappa analysis and Spearman correlation were used for statistics.
Results. 27.2% of the patients were uneducated, the rest were educated graduating from 50.8% primary school, 16.6% secondary/high school and 5.3% university. Mean training period of the patients was 4.9 years. 47.6% of the patients had at least one comorbid disease (*i.e.* hypertension, diabetes, hypo/hyperthyroidism, coronary artery disease, lung disease or obesity). Correlation of RAPID3 with the DAS28 and CDAI score was statistically significant ($p<0.001$). Similarly, educational status and the presence of comorbid disease didn't effect this correlation ($p<0.001$). Kappa analysis showing compliance of RAPID3 with DAS28 and CDAI scores was also significant ($p<0.001$). 100% of the patients with severe disease activity according to DAS28 also had moderate/severe disease activity according to the RAPID3. 77% of patients who were in remission according to DAS28 have near remission–minimal disease activity according to RAPID3. Patients with high disease activity according to the CDAI also had severe disease activity (100%) according to RAPID3, while 97% of patients who were in remission according to the CDAI have near remission-minimal disease activity according to RAPID3.
Conclusions. Similar to previous studies, RAPID3 was significantly correlated with DAS28 and CDAI score. Even though RAPID3 could be effected by patients educational status, when we compared the patients as educated/uneducated, there was no significance. At the same time, presence of co-morbid diseases didn't affect the correlation of RAPID3 with DAS28 and CDAI. RAPID3 can provide quantitative information in uneducated patients and with presence of co-morbid diseases just like DAS28 and CDAI.
Keywords. RAPID3, education level, co-morbid diseases.

P-121

How Many Patients Followed Up with Rheumatoid Arthritis (RA) Diagnosis Is Really RA? 1987 ACR Classification Criteria Compared with 2010 ACR/EULAR Criteria for Real RA Patients in Turkey

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Background. Early diagnosis is very important for RA. The 2010 ACR/EULAR RA classification criteria has been mainly developed for this purpose. However, these new criteria may cause RA over diagnosis.
Objectives. We aimed to determine the "real" RA in patients followed up with RA diagnosis and also compare the performance of 1987 and 2010 RA classification criteria in real life.
Methods. We analyzed 209 consecutive patients admitted to Hitit University Çorum Education and Research Hospital and Ankara Numune Education and Research Hospital rheumatology clinic who were diagnosed as RA and on a disease modifying anti-rheumatic drug (DMARD) therapy. Especially patients without typical seropositive RA were researched for a "true" diagnosis by history, physical examination, acute phase reactants, rheumatoid factor (RF), anti-cyclic citrullinated peptide (anti-CCP) and if necessary further tests. 85.2% of the patients were female and their median age was 53 (21-79). One hundred and twenty (57.4%) patients were diagnosed by a rheumatologist, 78 (37.3%) were diagnosed by a specialist of physical medicine and rehabilitation, 6 (2,9%) were diagnosed by an internist and 5 (2,4%) by other. The median follow-up period was 36 months (1-360). At the time of diagnosis 136 (65.1%) patients were presented with polyarthritis, 28 (13.4%) with oligoarthritis and 7 (3.3%) with monoarthritis. 138 (66%) of the patients had symmetric arthritis and 134 (64.1%) had morning stiffness lasting more than 30 minutes. 100 (47.8%) patients were presented with a high erytrocyte sedimentation rate and 130 (62.2%) were presented with a high serum C-reactive protein level. 136 (65.1%) were seropositive for RF and 54% were seropositive for anti-CCP.
Results. 19 (9.1%) of these patients who were previously diagnosed as RA had no longer symptoms, therefore we offered them discontinuation of DMARD therapy. When the remaining patients were reanalyzed, 50 (23.9%) patients had different disease. 16 (7.7%) had Sjogren or another collagen vascular disease, 14 (6.7%) had psoriatic arthritis or another spondyloarthropathies, 5 (2.4%) had undifferentiated arthritis, 4 (1.9%) had osteoarthritis, 3 (1.4%) had crystal arthritis, 2 (1%) had polymyalgia rheumatica and 6 (2.9%) of them had other diseases. In our study, 140 patients were classified for RA according to 1987 ACR and 2010 ACR/EULAR RA criteria. 94 (67.1%) patients fulfilled 1987 ACR criteria, 135 (96.4%) fulfilled 2010 ACR/EULAR criteria, and 92 (65.7%) patients fulfilled both of them.
Conclusions. In conclusion, we established that one third of patients followed up with RA diagnosis in clinical practice had transient undifferentiated arthritis or any disease other than RA. In diagnosis of "real" RA, the new criteria detect more patients than 1987 criteria (96.4% vs 67.1%). According to these findings, we think especially that RF and anti-CCP negative RA patients should be re-evaluated for "real" RA diagnose.
Keywords. Really RA, 2010 ACR/EULAR criteria, 1987 ACR criteria.

P-122

The Role of the Standard Basic Anti-Rheumatic Drugs and the Genetically Engineered Biological Drugs in The Treatment of Rheumatoid Arthritis

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Rheumatoid arthritis (RA) is diagnosed in approximately 0,5-2 % of the population. The mean age of patients (pts) who firstly established a disability is 41 years. RA is a serious social and economic problem, because of high prevalence of the disease, poor prognosis and the need for long-term therapy. The treatment of RA is associated with huge financial costs. This indicates an increasing in indirect costs.
Purpose. Estimation of influence of the standard basic anti-rheumatic drugs (DMARDs) and the genetically engineered biological drugs (GEBDs) on the RA activity and costs.

Materials and Methods. The study included 200 pts with RA (165 women and 35 men) aged 55 [46-61] years, with long-term course of the disease (5 [1-10] years), who were seropositive for IgM rheumatoid factor (83%) and antibodies to cyclic citrullinated peptide (81,6%) with moderate to high clinical disease activity (DAS 28=3,9 [3,1-4,9]). 160/200 (80%) pts with RA received DMARDs:139/160 (86,8%) pts took methotrexate, 18/160 (11,3%) pts-leflunomide, 3/160 (1,9%) pts-sulfasalazine. Treatment with GEBDs was used in 43/200 (21,5%) pts, including TNF-α in 19/43 (44,2%) pts, rituximab in 13/43 (30,2%) pts, abatacept in 9/43 (20,9%) pts, tocilizumab in 2/43 (4,7%) pts. 86/200 (43%) of RA pts took glucocorticoids. Follow-up period was 12 months, the disease activity was assessed by DAS 28.
Result. therapy with DMARDs has changed DAS 28 from 3,8 [2,9; 4,8] to 3,2 [2,5; 4,4], p=0,1. Total direct costs of different schemes of combined treatment using DMARDs were $ 1692 – 6031 per year. GEBDs monotherapy and combined therapy, including DMARDs and GEBDs causes a significant decrease in DAS 28 with 4,5 [3,5; 5,3] to 3,7 [2,5; 4,6], p<0,001. The costs of treatment, including GEBDs were $ 5346 – 32201 per year.
Conclusions. According to the results of the twelve-month follow-up, GEBDs therapy is a highly effective method to treat RA pts. The high cost of GEBDs therapy requires a careful assessment of the application GEBDs in clinical practice separately for each pts.
Keywords. Rheumatoid arthritis, DAS 28 index, genetically engineered biological drugs, standard basic anti-rheumatic drugs.

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Comparative Effectiveness of Alfacalcidol and Prednisone after 3 Months of Treatment, in 35 Rheumatoid Arthritis Patients

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The discovery of vitamin D receptor (VDR) in the immune system cells and the fact that some of these cells produce D hormone, indicated its immunoregulatory properties. Alfacalcidol, vitamin D analogue, administered in a daily dose of 2mcg showed effect in clinical improvement in patients suffering from Rheumatoid arthritis (RA), which strongly correlated with its simultaneously explored *in vitro* immunomodulatory actions.
Aim is to examine the comparative effect of alfacalcidol and prednisone to disease activity, functional capacity and quality of life in patients with active RA. The study included 35 RA patients from the Institute of Rheumatology in Belgrade, on standard methotrexate (MTX). Demographic data were collected, disease activity (DAS 28 score) was explored, functional disability (HAQ DI) and quality of life (SF36). Patients were randomly assigned to three-month treatment with 1μg, 2μg, 3μg alfacalcidol daily or prednisone 20 mg daily, for a month and 10 mg during the next two months, in addition to MTX. They were monthly followed clinically, laboratory tests and adverse events (AE) were collected. At the end of three-month period, they were reassessed. The average age of the patients (8 men) was 57.6±10.44 years, disease duration 5.75±3.778, the average dose of MTX was 15.35±3.118 mg, and 28 DAS score of 5.67±1.121, HAQ DI 0.667±0.6213 at the beginning. The groups were similar with respect to demographic and clinical characteristics. After three months of treatment alfacalcidol or prednisone, there was a statistically significant reduction in DAS 28 in both treatment groups, alfacalcidol N=30 (5.59 vs 4.64, p=0.02) and prednisone, N=5 (6.71 vs 4.99, p=0.01). Both groups achieved a statistically significant improvement in functional status: HAQ DI in alfacalcidol (0.663 vs 0.22, p=0.00), also in prednisone group (0.67 vs 0.463, p=0.02). There were no significantly difference in HAQ DI between different doses of alfacalcidol subgroups. In terms of quality of life, there was a statistically significant improvement in general health - GH (p=0.05), bodily pain - P (p=0.02), vitality - V (p=0.00) and social functioning - SR(p=0.04), in both groups. By comparing the changes in each alfacalcidol dosage subgroup, we found that the alfacalcidol 1μg group (N=10) significantly improved GH component (p<0.05), 2μg group (N=11) improved DAS 28, V and GH (p<0,05), while 3mcg group (N=9)improved DAS 28, GH, emotional role (ER), P and SR(p<0.05), compared to the baseline. Prednisone group (N=5) significantly better performed in DAS 28, GH, V, P, and SR (p<0.05). There were no significant AE. Three months of treatment with prednisone or alfacalcidol in active RA patients has led to the significant decrease in disease activity, improvement of the functional status of some of the components and the quality of life.
Keywords. Rheumatoid arthritis, alfacalcidol, disease activity.

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Patient Reported Outcomes after Failure of a TNFα Inhibitor in Rheumatoid Arthritis - Switching to Rituximab or Cycling between Anti-TNFs?

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Objectives. to evaluate the amount of change in Patient Reported Outcomes (PROs) (pain, global arthritis assessment, disability) with either rituximab (RTX) or a TNFα inhibitor (iTNF) as a second biologic in Rheumatoid Arthritis (RA) failing to respond to the first TNF antagonist.
Methods. 52-weeks observational study involving a cohort of 175 patients with active RA who failed to iTNF therapy in one public university hospital in North-East Romania; 80 RA further received at least two courses of rituximab (group 1), while 70 switched to another iTNF (group 2). PROs and disease activity scores (DAS28) were measured at baseline and 52 weeks after the initiation of a second biological agent, reporting any change (improvement or worsening) based on intra- and inter-group analysis.
Results. There were no significant differences between groups at baseline. Although longitudinal improvement was reported in all outcome variables over both treatment options, the effect modification was statistically significant (p<0.05) only for patients switching to RTX. Almost one-third of patients exhibit a decrease in PROs and EULAR response with a subsequent iTNF, while up to three-quarters with RTX. In addition, the improvement of pain, global RA status, function and DAS28 (EULAR good/moderate response) as well was more favorable with RTX, irrespective of the prior type of iTNF used; the change in average pain was – 40.25, global status – 3.52 and DAS28 –3.29 for RTX versus –20.5 for pain, -1.34 for global status and -1.23 for DAS28 with the alternative iTNF (p<0.05).
Conclusions. The efficacy of subsequent TNF inhibitor treatments after a patient fails on the first is often reduced. Switching to rituximab resulted in greater improvements in PROs at 52 weeks compared with switching to an alternative TNF inhibitor. PROs can definitely perceive modification of RA status in patients receiving biological agents
Keywords. Patient reported outcomes, rituximab, TNF-α inhibitors.

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Relationship Between Disease Activity and Muscle Wasting in Rheumatoid Arthritis (RA) Patients

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Introduction. Not only joint destruction but also muscle wasting due to rheumatoid cachexia has been problem in terms of quality of life with RA. In this case control prospective study we want to show a relation between disease activity and serum creatinin kinase-a marker, which reflects muscle mass-levels in active RA patients.
Methods. Age matched 71 female RA patients as study group and 34 female osteoarthritis patients as control group were included in to the study. Patient's data including acute phase reactants (erythrocyte sedimentation rate-ESR and C-reactive protein-CRP), rheumatoid factor (RF) and anti-CCP positivity and disease activity scores (DAS28-RA) were collected. Serum creatinin kinase (CK) levels were measured.
Results. RA patients group: DAS28: 5.79±1.29; ESR: 69±31 mm/h; CRP 32.5±40 IU/L; RF: 183±23.1 IU/mL; CCP: 91.5IU/mL. 18 patients were obese (BMI>30) and remaining patients' BMI<30. 56 patients were using steroids and mean steroid dose was 5.13±2.8 mg/daily. All patients were in at least one disease-modifying antirheumatic drugs (DMARDs) therapy alone or in combination. Mean CK level was 38±25 mg/dL.
OA control group: ESR 23±16 mm/h, CRP: 7.3±4.4 IU/L; RF: 18.3±34.8 IU/mL, CCP: 24.0±15.6 IU/L. 16 of controls were obese (BMI>30), the remaining controls were in normal ranges (BMI<30). None of the controls were using steroids. Mean CK level was 73±34mg/dL.
"Pearson's Correlation Analysis" was performed. P<0.05 was accepted as significant. There was a significant difference between the study and control groups about the CK levels (p<0.004). Inverse correlation between DAS 28 and serum CK levels were significant (p<0.001).

Discussion. Increased activity was accompanied by a decrease in serum creatinin kinase. From 1978 we know that in active RA, urinary creatinin excretion was invariably increased according to the disease activity. Therefore, inflammation could be characterized as double-edge sword, requiring a balance between health as maintained by regular exercise and activities that would exacerbate inflammatory response. In RA patient population exercise is necessary to prevent muscle contractions and mobility. Type of exercise should be well decided and balanced in RA patients.

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Keywords. Rheumatoid Arthritis, Muscle wasting, creatinin kinase (CK), disease activity.

P-126

Effects of Low Dose, Long Duration Steroid Use on Body Mass Index (BMI) of Patients with Rheumatoid Arthritis (RA)

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Introduction. Steroids have been used for the treatment of rheumatoid arthritis(RA) as remission induction agents with the other biologic and non-biologic disease modifying anti-rheumatic drugs in rheumatology practice. They also give relief to patients in a short while. Steroid dosage less than 7.5 mg/day prednisone equivalent is accepted as low dosage. On the other hand steroids are mostly suggested as the responsible of obesity in patients. We aimed to show steroid effects on the body mass index (BMI) of patients.

Method. 246 RA patients were involved in to the study. 192 patients (78%) were receiving steroid and 54 patients (22%) were not. Mean steroid dosage was 5.1±2.8 mg/day SD (min-max: 1-16 mg/day) median dosage was 4 mg/day. 88 (35.7%) patients' BMI was >=30, 158(64.3%) patients' BMI was<30.

81.8% of patients with BMI>=30 were using steroids during mean 8.8 year (Min-max: 1-25 year), median: 7 year. Mean steroid dosage used of those patients was 4.23 mg/day (min-max: 1-16 mg/day), median 4.0 mg/day.

75.9% of patients with BMI<30 were using steroids during mean 5.8 year (min-max: 0-18 year), median 4 year. Mean steroid dosage used of those patients was 3.9 mg/day (min-max: 1-16 mg/day), median 4 mg/day.

Mann-Whitney U test was used for the comparisons of the data for both groups. *P* value <0.05 was accepted as significant.

Results. There was no correlation between the steroid use, dosage and BMI ($p>0.05$).

Conclusion. Obesity affects the quality of life of RA patients by decreasing functional capacity and the risk of atherosclerotic plaque formation. Always, steroids are the challenging drugs for use. But, they do not affect patients in low doses even those patients' BMI is higher than 30. Cytokines in the pathogenesis of the inflammation in RA like IL-6 and TNF-alpha may be more responsible for the obesity.

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Keywords. Low Dose, Long Duration, Steroid, Body Mass Index (BMI), Rheumatoid Arthritis (RA).

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Rheumatoid Factor Level Increased by the Tocilizumab in Rheumatoid Arthritis Patients with Good Clinical Response

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Background. Several studies have shown a relationship between rheumatoid factor (RF) alterations and the clinical response in rheumatoid arthritis (RA) patients. Reduction of RF levels has been described during IL-6 blocking therapy in RA patients. Tocilizumab (TCZ) is a recombinant humanized antihuman IL-6 receptor monoclonal antibody which showed clinical efficacy in RA. In this study, we evaluated the effect of IL-6 blocking therapy on RF alterations in RA patients with good clinical response to this treatment.

Methods. Patients were considered eligible if they fulfilled the American Rheumatism Association revised criteria for classification of RA and their disease duration was longer than six months. 20 RF positive RA patients with good clinical response after 12 weeks of TCZ treatment were enrolled in this study. Good clinical response was defined as at least 20% improvement in signs and symptoms of rheumatoid arthritis according to American College of Rheumatology criteria (ACR20 response). The ACR20 response to therapy was recorded before and after 12 weeks of treatment. RF was measured by latex agglutination test; normal value 15 IU/ml. This study was approved by the ethics committee of University Hospital Split, and informed consent was obtained from all patients.

Results. The serum titer of RF increased significantly after 12 weeks of treatment ($p<0.05$). When we grouped the patients on the basis of their clinical response to TCZ, a significant increase in serum levels of RF was observed only in those who were clinically improved according to ACR20 criteria. It is likely that the ACR50 group was too small to show any significant change in RF.

Conclusions. The possible underlying mechanisms whereby IL-6 blocking therapy could lead to alterations of RF are not understood. It is known that IL-6 enhances the production of immunoglobulin and autoantibodies such as RF so these results are completely unexpected. The possible explanation for this phenomenon could be the development of autoantibodies during IL-6 blocking therapy. We speculate that systemic blockade of IL-6 paradoxically enhance its over-production in some local tissues.

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Keywords. Rheumatoid factor, tocilizumab, rheumatoid arthritis.

P-128

Pulmonary Aspergilloma Complicating the Evolution of Rheumatoid Arthritis Treated with Corticoids and Methotrexate

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Introduction. Pulmonary involvement during rheumatoid arthritis is frequent and can be occasionally related with opportunistic infection. We will show this complication by observing a pulmonary aspergilloma.

Observation. A man, 49 year old, smoker 15 PA, with antecedents of pulmonary tuberculosis treated on 1989, and being monitored for seropositive and erosive RA. He was treated since 2004 with methotrexate (MTX) with a dose up to 15mg/week and prednisone with 10mg/day. Given the exertional dyspnea, a CXR is performed in March 2010 that revealed a left superior excavated lobar infiltration. Smears were negative and bronchoscopy was normal. A chest CT Scan confirmed the diagnostic of Aspergilloma. The patient was assigned for surgical treatment.

Conclusion. Pulmonary Aspergilloma is an opportunistic infection caused by inhalation of ubiquitous filamentous fungi spores; it occurs mainly on sequelae lesions of tuberculosis, as was the case of our patient. The concept of smoking is an incentive to eliminate bronchial carcinoma. RA does not appear to increase the risk of opportunistic infections. The first reported cases have coincided with the introduction of MTX treatment. This is a serious condition, the main risk of progression being the hemoptysis with an estimated mortality of 14%. Early diagnosis is necessary to indicate early surgical treatment.

Keywords. Aspergilloma, rheumatoid arthritis, methotrexate.

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Cutaneous Vasculitis as a Relevant Manifestation of Rheumatoid Arthritis

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Rheumatoid arthritis (RA) is an idiopathic arthropathy syndrome that has a propensity to affect the small joints of the hands and feet with extra-articular manifestations comprising skin lesions. The most widely recognized skin lesion is the rheumatoid nodule. Other skin manifestations are poorly defined Pyoderma gangrenosum and erythema elevatum diutinum are rarely associated with Rheumatoid Arthritis (RA).

We describe the case of a 28 years women with no further medical history con-

sulting with bilateral symmetrical polyarthritis. Examination showed synovitis of both wrists, left knee and metacarpophalangeal joints, cutaneous examination revealed non pruritic papules knees which evolved from four years ago. The biopsy showed a leukocytoclastic angiitis appearance of a related erythema elevatum diutinum. Laboratory tests are a biological inflammatory syndrome, strongly positive anti CCP, a rheumatoid factor. The diagnosis of rheumatoid arthritis is retained on the EULAR criteria 2009. The evolution under treatment (methotrexate) is favorable.
A cutaneous vasculitis investigations should expand explorations especially when combined with joint manifestations
Keywords. Rheumatoid arthritis, Vasculatis, Skin.

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Depression and Anxiety May Reflect a Disease Activity in Rheumatoid Arthritis

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Objective. Rheumatoid arthritis (RA) and psychological trauma or severe stress are well correlated. Depression and anxiety with psychoneuroimmunological factors have the significant impact in RA. Our main goal was to evaluate the correlation of mental health status and RA activity estimated by the laboratory and clinical parameters.
Material and Methods. The open clinical prospective study that lasted for 6 months was performed. Total 72 patients were included, among them 58 women and 14 men, aged 34 to 80 years, were checked for current mental health. RA patients were randomized according to the Brief Inventory Scale (BSI) with 53 questions included ranging from 0 (no symptoms) to 4 (severe). This testing was done once during a study. Based on the results, RA patients were selected into mentally stable and mentally unstable ones. The following laboratory and clinical parameters were analyzed: sex, age, Erythrocyte Sedimentation rate (ESR), Rheumatoid factor (RF), C-reactive protein (CRP), Anti-cyclic citrullinated peptide (anti-CCP) antibody, Disease activity score (DAS28). No extra-articular involvement was seen in any RA patients. The hi-square test, ANOVA, Pearson's coefficient and IBM Statistics - SPSS v19 were used.
Results. Our results have shown that from total 72 RA patients, 44 RA patients were mentally stable and 28 mentally unstable. All patients had active disease either moderate or severe. The only significant correlation of depression and anxiety with activity of RA was found in CRP and DAS28, but no significance was detected in ESR, RF and anti-CCP. The DAS28 showed a high disease activity with average of 5.3 and CRP of 20.9 mg/L in patients with unstable mental health compared to stable mental health patients where RA was associated with moderate DAS average valued of 4,35 and CRP of 14,1 mg/L. Depression and anxiety was found in all 28 (39%) of RA patients.
Conclusion. Mentally unstable RA patients correlate more with severe disease activity, while mentally stable express moderate disease activity.
Keywords. Rheumatoid arthritis, Depression, Anxiety, DAS.

Table. Inflammatory markers and DA in Mentally Stable and Unstable RA.

N AS	SD	SEM	Minimum	Maximum	*p* value
ESR M.S. 44	35,8636	26,90171	4,055594	,00122,0	0,399
M.U. 28	39,1875	24,39185	6,09796	6,00	78,00
Total 72	36,7500	26,09411	3,36874	4,00	122,00
RF M.S.44	249,1114	813,20421	122,59515 3,00	5330,00	1,000
M.U.28	331,6500	665,38239	166,34560	5,00	2510,00
Total	72271,1217	771,93228	99,65603	3,00533	0,00
CRPM.S.44	14,1834	17,09818	2,57765,30	58,20	0,265
M.U.28	20,9481	28,34336	7,08584	3,08	113,00
Total	72	15,9873	20,64965	2,66586,30	113,00
Anti CCP M.S. 44	12,6163	35,35963	8,83991,33	145,0	0,609
M.U.	28	23,5618	78,91150	11,89636,00	421,70
Total	72	20,6430	69,85728	9,01854,00	421,70
DAS28 M.S.	44	4,3595	1,17267,17679	1,54	6,44,002
M.U.	28	5,3363,8	4941,2	1235	2,99 6,47
Total	72	4,6200	1,17276,15140	1,54	6,47

MS: Mentally stable patients; MU: Mentally unstable patients; N: Number of RA patients; AS: Average score; SD: Standard deviation; SEM: Standard error of the mean; P: *p* value.

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Serum Adenosine Deaminase Level in Patients with Rheumatoid Arthritis: Relationship with Clinical Factors

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Serum adenosine deaminase (ADA) have been previously proposed to predict disease activity in patients with rheumatoid arthritis (RA). The aim of this study was to investigate the levels of serum ADA, and the relationship between ADA and disease activity markers in a group patients with RA. A hundred and 10 patients with a diagnosis of RA were recruited from outpatient clinic of Rheumatology Unit. Demographic properties comprising age, gender, disease duration and drugs were recorded. Disease activity based on DAS28-ESR and DAS28-CRP, ESR, CRP, RF levels and pain by VAS were recorded. Serum ADA levels (IU/L) were determined in all RA patients and in 55 age and sex similar healthy control subjects. Ninety-six female and 14 male RA patients with a mean age of 54.32+11.51, and with a mean disease duration of 11.5+9.13 years were included to the study. The study group comprised of 48 female and 7 male healthy subjects. 35.5% of the patients were on methotrexate (MTX) and 64.5% of patients were on combined DMARDs or combined MTX and anti-TNF therapies. The mean serum ADA level was higher in RA patients than in control subjects (27.01+10.6 IU/L vs 21.8 +9.9 IU/L). The mean values of ESR (23.2+14.8 mm/h), CRP (1.71+1.11mg/dL), pain by VAS (37.2+27.1), DAS28-ESR (2.72+0.77), DAS28 CRP (1.37+0.5) were not correlated with ADA levels ($p>0.05$). Our results have shown that serum ADA levels are higher in RA patients but were not related with any of the disease activity markers. We conclude that ADA in the serum may not be a reliable biochemical marker to predict disease activity in patients with RA.
Keywords. Serum, adenosine deaminase, rheumatoid arthritis, clinical activity.

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Clinical Response in Rheumatoid Arthritis Patients with Anti-Infliximab Antibodies

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Background. Chimeric anti TNF antibodies immunogenicity has a profound effect on response in rheumatoid arthritis patients (RA). Anti infliximab (IFX) antibodies may induce low serum drug level, higher drug clearance, serious adverse events and may contribute to loss of therapeutic response and poor drug survival. Concomitant disease modifying anti-rheumatic drug (DMARD) association, especially methotrexate (MTX), seem to lower the immunogenicity of the drug.
Objectives. To assess IFX immunogenicity in RA patients with moderate and high disease activity despite biologic treatment and to monitor further clinical response at 8 weeks without any therapy changes.
Methods. 20 patients with moderate and high RA activity treated with IFX had given informed consent to remain on the same treatment for 8 weeks, despite disease activity. Serum IFX and anti-IFX levels were measured using ELISA kits (Promonitor® IFX and anti-IFX). Drug and anti-drug levels were determined just before a new IFX infusion. Patients were divided in two groups depending on their anti-IFX status. Clinical activity and improvement was measured using DAS28 score and EULAR response. Demographic data (age, sex, disease duration, previous treatment regiments), lab test results (erythrocyte sedimentation rate, C-reactive protein, rheumatoid factor, anti cyclic citrullinated peptides) and clinical composite scores were collected at baseline (time of first dosing IFX and anti-IFX level) and 8 weeks after.
Results. Nine patients (45%) had anti IFX antibodies, 77.8% of them having undetectable drug level and the rest (22,2%) of patients having subtherapeutic drug level. Also, four patients without anti IFX antibodies had undetectable drug level. Remarkable, a great proportion of patients (40%) who had anti IFX antibodies had no MTX associated. Also 35% of patients had no anti IFX antibodies while being on treatment with MTX. Two patients were treated with leflunomide, 1 patient with sulfasalazine and another one with azathioprine. Eight patients that did not have MTX associated were anti IFX antibody positive. Eleven patients that had co-treatment with MTX, dose ranging from 7.5mg/week to 20mg/week, did not have anti IFX antibodies. MTX dose was inversely correlated to anti IFX Ab status ($p=0.048$, $r=-0.447$). Regarding clinical response, at baseline there were no differences between the two groups in disease duration, IFX treatment

duration and DAS28. After 8 weeks of treatment without modifications, patients with anti IFX antibodies had higher DAS28 and lower class in EULAR response (p=0.006, p=0.002).
Conclusions. IFX immunogenicity has a great impact on clinical response in RA patients. MTX association seems to negatively correlate to the presence of anti IFX antibodies, reflecting its ability to lower IFX immunogenicity. Since methotrexate dose was inversely correlated to anti IFX status, the optimal MTX dose in order to lower immunogenicity should be investigated further.
Keywords. Rheumatoid arthritis, infliximab, immunogenicity, methotrexate.

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Adalimumab Serum Drug Level Correlates to Clinical Response in Patients with Rheumatoid Arthritis

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Background. Although adalimumab (ADA) is a fully human antibody, there still remains the potential to induce anti-drug antibodies. 1 This may result in lower serum drug level and reduced clinical response. 2 Serum drug monitoring may be useful to predict clinical response in rheumatoid arthritis (RA) patients treated with ADA.
Objectives. To assess ADA serum drug and anti-drug antibody level and their correlation to further clinical response after 3 months from first sign of inadequate response.
Methods. Twenty patients with long standing RA were monitored for one year period. Patients that experienced a disease flare being on a stable treatment with synthetic disease modifying anti-rheumatic drugs and ADA, where included in the final analysis and drug serum level and anti-drug antibodies were assessed at the moment of disease flare (baseline). Other parameters that were monitored at baseline and after 4 months of stable treatment were: 28-joint Disease Activity Score (DAS28), EULAR response, erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP).
Results. In our cohort, mean treatment duration in patients with detectable drug level was 46.7±25.2 with DAS28 at baseline of 3.39±1.04. Only one patient had undetectable serum ADA level, with DAS28 at baseline of 3.54. Patients mean DAS28 at baseline was 3.41, 56% of patients having moderate disease activity and 11% - low disease activity. No anti ADA antibodies were found. At follow-up 67% of patients obtained remission, 11% had moderate disease activity and 22% had low disease activity. ADA serum level at the moment of disease flare correlated to DAS28 at follow-up (p=0.001, r=0.65). Five patients obtained good EULAR response, one patient moderate and 3 patients no EULAR response. ADA serum level did not correlate to EULAR response (p=0.194), but this may be due to small sample size.
Conclusions. No anti ADA antibodies were found in patients experiencing a RA flare being on stable remissive treatment. serum ADA level at the moment of flare correlated to DAS28 at follow-up. This result is an argument that measuring serum ADA level may help to optimize and personalize usage of biological therapies.
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Keywords. Rheumatoid arthritis, adalimumab, serum level, clinical response.

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The Role of Inflammation in a Regulation of Body Composition in Patients with Early Rheumatoid Arthritis

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Actuality. The adipose tissue is an active endocrine organ that synthesizes adipokines (adiponectin, leptin, etc.). The relation between adipokines and activity markers of inflammation are discussed in rheumatoid arthritis (RA). Patients with RA have the redistribution of fat mass (abdominal obesity). Standard anthropometric obesity indicators (body mass index (BMI) and waist circumference (WC)) do not show a difference between fat mass (FM) and lean (muscle) mass (LM). Dual-energy X-ray absorptiometry (DXA) is able to clarify body composition in patients with early RA.
Aim. Evaluate the role of inflammation in a regulation of body composition in patients with early RA.
Material and Methods. The study included 28 women with early RA (criteria ACR / EULAR, 2010), 57 [46.5, 62.0] years old, with median disease duration - 6.0 [5.5, 15.5] months, seropositive for IgM RF and anti-CCP. All patients had a high RA activity (DAS28 5,5 [5,1; 5,9]; SDAI 32,4 [22,4; 41,7], CDAI 29,0 [19,7; 39,5]), never receiving glucocorticoids and DMARD therapy. The control group consisted of 16 healthy subjects without rheumatic diseases, matched by age and sex with RA patients. The concentration of adiponectin and leptin in serum samples was determined by ELISA (Bio Vendor, Brno, Czech Republic and Diagnostics Biochem Canada Inc., respectively). Body composition was measured by DXA with densitometer HOLOGIC (USA).
Results. The significant differences in LM was obtained in RA patients and the healthy donors (40530.35 [37641.7; 48629.0]g and 47904.1 [44537.9; 51431.9] g, p=0.02). Anthropometric indicators (WC, BMI) were similar in two groups. Adiponectin level in RA patients was higher and leptin concentration was lower than in the controls (20.5 [14.5; 43.2] and 9.4 [7.0; 12.4]ng/ml, 24.0 [13.3; 37.1], and 34.5 [24.2; 53.9]ng/ml, respectively, p<0.05). There were correlations between inflammatory markers (CRP, ESR) and WC (r=0,41 and r=0,45), BMI (r=0,56), FM (r=0,56), leptin level (r=0,43); high leptin concentration was associated with FM (r=0,87) and LM (r=0,54) (p<0,05 in all cases). Adiponectin levels did not correlate with these parameters.
Conclusion. The reduction of muscle tissue in early RA is due to inflammation and leads to "rheumatoid cachexia" in this category of patients. There was a relationship between obesity, some adipokines and inflammatory markers.
Keywords. Rheumatoid arthritis, obesity, fat mass, lean mass, adipokines, leptin, adiponectin, dual-energy X-ray absorptiometry, inflammation.

P-135

Validation of Composite Disease Activity Scores in Rheumatoid Arthritis in Algeria

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Objectives. To validate and establish new cut-offs for DAS28, CDAI and SDAI in Algerian RA patients taking the appreciation of the rheumatologist as a gold standard of disease activity.
Methods. Data from a nationwide prospective cohort of RA patients, recruited from October 2010 to March 2011 in 11 centers. At inclusion, demographic, clinical and biochemical tests were collected. Determination of DAS-28, SDAI and CDAI at baseline was performed for all patients. Correlations were made between the 3 scores, than kappa tests were performed between each score. New cut-offs for DAS28 have been determined by studying the Receiver Operator Characteristics curves, taking the appreciation of the rheumatologist as a gold standard for the determination of DAS-28 values, and the new SDAI and CDAI cut-offs were determined by taking into account the DAS28 appreciation as gold standard. All tests were carried out using SPSS 20.0
Results. 249 RA patients were recruited, mean age 50.1±14.5 years, mean disease duration 8.4±7.8 years; 85.5% were females. The mean DAS28 was 3.9±4.8 and mean SDAI 22.5±21.7. Correlations between DAS-28 and CDAI and between DAS-28 and SDAI were excellent (r=0.631; p<0.001 and r=0.806; p<0.001, respectively). However, Kappa test of concordance was poor (0.41 between DAS-28 and SDAI and 0.20 between DAS-28 and CDAI). High correlation associated with poor agreement meant that cut- offs values needed to be adjusted. We've obtained new cut-off values for remission, low and high disease activity for DAS28

(3.2, 3.9 and 5.7, respectively) for SDAI (6, 9 and 28, respectively) and for CDAI (2, 4 and 13, respectively).
Conclusions. CDAI and SDAI are highly correlated with DAS-28, allowing them to be used in routinely practice in Algerian RA patients. However, cut-offs were adjusted to give the right categorization of patients in the right disease activity category. These data need to be validated prospectively.
Keywords. Rheumatoid arthritis, activity, composite indexes.

P-136

Methotrexate in Rheumatoid Arthritis. Tolerance and Maintenance in Real Life Conditions in Algerians

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Aim. To evaluate maintenance of methotrexate (MTX) in rheumatoid arthritis (RA), one year after initiation and to study causes of drug interruption and factors associated with bad tolerance.
Methods. A retrospective study of RA patients followed at 2 university centers. Were included files of patients for whom MTX has been initiated and a follow-up period of at least 12 months was available. We have collected demographic, clinical and lab data, as well as taken medications. We have noted during the follow-up period all adverse events as well as drug interruptions. Variables are presented as means ± standard deviations. The maintenance level was estimated as a proportion (95% CI). Factors associated with drug interruption were tested using a t-test followed by a multivariate analysis. Alpha error level was set at 0.05.
Results. Among 531 RA patients followed in the 2 centers, 211 files have been selected for the study, 82.0% women, mean age 47.7±13.2 years, with a mean duration of the disease of 7.9±7.0 years. Mean DAS28 at MTX initiation was 5.3±2.0; 69,7% of patients had X-ray erosions. Mean MTX dosage at initiation was 12.3 mg/week (extremes: 5 – 20 mg/week), and the mean maximal dosage during the 12 months of follow-up was 16.0 mg/week (extremes: 7.5 – 25 mg/week). At 12 months from initiation, 24.7% of patients were under remission as defined by a DAS28 < 2,6. Sixty patients (28.4%) experienced adverse events, mainly gastrointestinal (25.1%) and neurosensory (4.3%). Maintenance rate at 12 months was 89.6% (95% CI: 84.7% - 93.0%). Causes of interruption were mainly gastrointestinal intolerance (13 patients) and the desire for pregnancy (3 patients). Univariate analysis has detected three factors associated with drug withdrawal: female sex (p<0.001), the presence of erosions (p=0.041) and the higher initiation dosage of MTX (p=0.002).
Conclusion. In this study evaluating Algerian RA patients in real life conditions, maintenance therapy under MTX at 12 months after initiation was excellent, nearly 90%. Adverse events were mainly gastrointestinal. Advanced age, a factor classically found in clinical trials as leading to failure under methotrexate, was not found in our patients; however, female sex, erosive disease and high initiation dosage were associated with a higher probability of stopping treatment.
Keywords. Rheumatoid arthritis, methotrexate, maintenance.

P-137

The Diversity of Laboratory and Radiological Characteristics Between Seropositive and Seronegative Rheumatoid Arthritis Patients

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Background. Opinion is still divided regarding the question: Do seronegative and seropositive Rheumatoid Arthritis (RA) show variation of the same disease or are they two different forms? In response to this dilemma researches have been performed showing evidence for the first time on patients from Kosovo.
Objectives. To investigate differences of laboratory and radiological characteristics of RA regarding serostatus.
Methods. Retrospective analysis was conducted of two hundred fifty patients diagnosed with RA and classified according to the 1987 American College of Rheumatology criteria.
All examinees were between 25-60 years of age (Xb=49.9,SD=10.3) with disease duration between 1-27 years (Xb=6.4,SD=6.4). Patients all belonged to the 2nd and 3rd functional classes (ARA). Corresponding methods were performed for laboratory tests. All patients underwent standardized evaluation radiographs of the hands and feet (ARA) and radiographs of the other joint.
Results. Elevated average values of eritrosedimentation (ERS) and C-reactive protein (PCR) in seropositive patients were found. Reduced values of hemoglobin (Hb) were found more frequently in seropositive patients (t=2.26, p<0.05), especially female seropositive patients (t=4.38, p<0.01). Statistically significant difference was found in average values of fibrinogen in the seropositive subset (t=2.10, p<0.05), especially in female seropositive patients (t=2.65, p<0.01). Elevated immunoglobulin (IgM) values were more prominent in the seropositive subset (χ2=47.6, p<0.01), especially among seropositive females (χ2=35.68, p<0.01). Levels of C3 and C4 components of the complement were reduced in seropositive tested subjects. Increased values of gamma-globulin were confirmed with statistical significance (χ2=3.39, p<0.05) in seropositive subjects, while alfa-2 globulin values were nearly equally distributed in both subsets. Anatomic changes of 2nd and 3rd level (ARA) were nearly equally distributed in both subsets [76(60.8%) seronegative, 75(60%) seropositive]. Longer duration of the disease result in increased radiological changes in both subsets [(r=0.66, p<0.01)seronegative, (r=0.49, p<0.01)seropositive]. Eritrosedimentation values correlated with radiological damages, but significant statistical difference was found for seronegative subset only (r=0.24, p<0.01).
Conclusions. Radiological damages are nearly equal in both subsets, elevate in relation to the duration of the disease and correlate with ESR values. Acute-phase reactants, IgA, IgG levels and alpha-2 globulins levels, with some irrelevant differences, are almost equal regarding sero-status. Gama-globulins, IgM and reduced complement component C3 and C4 in serum are prominent in seropositive patients. With regard to sero-status, differences within sex, with some exceptions, are not relevant.
References (11)
Keywords. Rheumatoid arthritis, seropositive, seronegative, laboratory analysis, radiography estimation.

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Secondary Failure to Etanercept in Rheumatoid Arthritis Patients – The Role of Immunogenicity, Characteristics and Evolution of The Disease

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Background. Treatment of rheumatoid arthritis (RA) with tumor necrosis factor (TNF) inhibitors positively influenced the evolution and prognosis of the disease. Nevertheless, not all patients respond favorably to this therapy: in some cases response to treatment is inadequate from the beginning (primary failure), in others, even if there is initially good response, it is lost after a variable period (secondary failure). One of the main cause of secondary failure is drug induced immunogenicity. Etanercept (ETA) is a fully human, recombinant dimeric fusion protein consisting of the extracellular ligand-binding portion of the human TNF receptor linked to the Fc portion of human IgG1.
Objective. To investigate clinical response to ETA, its relationship to serum drug level and drug immunogenicity (the presence of antidrug antibodies- ADAb) and further evolution of these patients.
Methods. We followed 45 RA patients treated with ETA and synthetic disease-modifying antirheumatic drug (DMARDs). Clinical data (number of tender and swollen joints), laboratory (ESR, CRP, RF ACPA) variables and activity scores (DAS28, SDAI, and EULAR response) were collected at baseline and at each reevaluation. All patients that had an inadequate response were tested for both serum drug level and antidrug antibodies level by ELISA (using Progenika kits Promonitor-ETA, Promonitor-anti-ETA) at the time of their first sign of inadequate response (baseline) and then after 3 to 4 months. Statistical analysis was performed using SPSS statistical software, version 20.0.
Results. During the evaluation period,18 (40%) of all 45 ETA treated patients (treatment duration 49.38 ± 38.03 months) had a late inadequate response (evaluated by DAS 28, SDAI and EULAR response). Seven patients had methotrexate associated ranging from 10mg to 20mg/week, 6 patients had leflunomide 20mg/day and there were 5 (27.7%) patients without a csDMARD. At baseline, 77.77% of patients had moderate and high disease activity evaluated by DAS28 score and only 3 patients had undetectable drug levels. No anti-ETA antibodies were found in all group. Patients with detectable ETA drug levels had better EULAR response (p=0.023). At follow-up, higher DAS28 score was observed in patients with undetectable ETN levels (undetectable 7.17±1.21 versus detectable 3.57±1.65, p=0.003). Similar results were obtained in regards SDAI evolution. Detectable drug level correlated with EULAR response at 4 months (r=0.550, p=0.018). There was no statistical difference regarding drug level and immunogenicity regarding patients with no DMARDs associated

Conclusion. Better evolution after the first inadequate response correlated with the presence of detectable drug level. None of the patients experiencing late inadequate response had anti-ETA antibodies suggesting that loss of response is not immunogenicity related. Also, therapeutic drug monitoring can be used to predict further clinical pattern.
Keywords. Rheumatoid arthritis, secondary failure, etanercept, immunogenicity, drug level, anti-drug antibodies.

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Efficacy of Leflunomide 100mg Weekly Compared to 10mg Methotrexate Weekly in Patients with Active Rheumatoid Arthritis

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Background. Leflunomide has demonstrated efficacy for the treatment of RA. The conventional therapeutic dosing scheme is a loading dose of 100 mg/day for 3 days followed by 20 mg/day thereafter. Eliminating the 3-day loading dose may decrease the risk of adverse effects, most of Rheumatologists don't use the loading dose any more.
Objective.
To determine the clinical efficacy and safety of Leflunomide (LFN) 100mg/week compared to Methotrexate (MTX) 10mg/week in a randomized, controlled trial with 26 weeks of follow up in Rheumatoid Arthritis (RA) patients.
Patients and Methods. 40 Libyan Patients who met The 2010 ACR/EULAR classification criteria for RA and presented with active disease were included. All patients had medical records, including laboratory tests and hand X-rays. Clinical evaluations for improvement and ACR and EULAR response criteria were performed. Statistical analysis for independent's samples between both groups defined a *p* value of <=.05. Safety was evaluated by comparing the proportion of adverse events (AE) registered.
Results. 40 patients were screened and randomized: 20 patients received 100 mg LFN weekly and 20 patients received MTX 10 mg per week, all received 10mg prednisone daily for two weeks followed by 5mg for another 4 weeks, NSAIDs were allowed during the entire study period on demand, all patients had regular follow up for 26 weeks. All 40 patients completed the study.. ACR20 improvement criteria were achieved by LFN group in 100%, and in 95% by the MTX group at week 26, ACR 50 improvement was achieved in 90% of both groups, ACR 70 in 80% in the LEF group and 75% in the MTX group at the end of the study. At the beginning of the study DAS28 was 5.85 and improved to3.07 in the LFN group versus 5,92 and 3.22 in the MTX group. AE for each group was 1 patient in the LFN group, and 2 patients in the MTX group. Regarding safety, no serious AE of a life threatening nature were reported.
Conclusion. Leflunomide 100 mg weekly is adequately effective and safe as 10 mg Methotrexate per week in the treatment of active Rheumatoid Arthritis after 26 weeks of follow up.
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Keywords. Leflunomide, weekly, in Rheumatoid Arthritis.

P-140

Dependency in Activities of Daily Living in Younger and Older Patients with Rheumatoid Arthritis

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Background. Rheumatoid arthritis (RA) is an important cause of functional disability. Joint problems, anemia, steroid induced myopathy and medical illness related depression may cause significant disability in these patients. The degree of disability may be higher in elderly RA patients. Detection of factors underlying disability in RA may be useful to find protective measures.
Objectives. We aimed to determine the level of dependency and seek its association with disease activity, life quality and mood disorders.
Methods. We enrolled patients with RA who admitted to our outpatient clinic. Level of dependency was assessed using Katz activities of daily living (ADL) and Lawton instrumental ADL scales. Disease activity was determined with DAS28 score. Joint pain and disease activity was also assessed using visual analog scale (VAS). Life quality was assessed using health assessment questionnaire (HAQ) and rheumatoid arthritis quality of life (RAQOL) scales. Beck depression and Beck anxiety tests were applied to determine presence of mood disorders. Degree of fatigue was assessed using functional assessment of chronic illness therapy (FACIT)-fatigue questionnaire. Creatinine, hemoglobin, and erythrocyte sedimentation rate values were recorded. Multivariate linear regression analysis was performed to define factors independently associated with dependency in ADL.
Results. Nineteen patients were enrolled to the elderly (>60 years old) group and 34 patients were enrolled to the younger group. Comparison of elderly and younger patients is shown in Table I. Linear regression analysis revealed that HAQ (t=3.9, $p<0.001$), hemoglobin (t=2.4, $p=0.02$) and VAS-disease activity (t=2.3, $p=0.03$) were independently associated with dependency in ADL.
Conclusions. The rate of dependency in ADL was high in these patients. However, degree of dependency was similar in younger and older RA patients. Worse general health status, high perceived disease activity and anemia were independently associated with dependency in ADL. Taking perceived disease activity into consideration along with other disease activity markers may prove beneficial in RA patients.
Keywords. Rheumatoid arthritis, dependency, disease activity.

Table I. Comparison of younger and older patients with rheumatoid arthritis.

	Younger RA	Older RA	p
Gender (%males)	5.9	21.1	0.2
Age	48.9 ± 7.8	66.7 ± 4.7	<0.001
Duration of disease	101.6 ± 85.2	114 ± 89.2	0.6
Age of diagnosis	40.8 ± 8.5	57.2 ± 9.5	<0.001
ADL	9.8 ± 0.5	10 ± 0.2	0.2
Any dependence in ADL (%)	14.7	5.3	0.4
IADL	12.7 ± 1.4	12.4 ± 2.1	0.5
Any dependence in IADL (%)	58.8	52.6	0.7
DAS28	3.8 ± 1.4	4.1 ± 1.3	0.4
HAQ score	14.8 ± 11.7	17.9 ± 14.7	0.4
RAQOL score	14.4 ± 8.7	15.4 ± 8.2	0.7
VAS-pain	34.7 ± 21.8	32.9 ± 26.1	0.8
VAS-disease activity	41.3 ± 18.2	38.4 ± 23.6	0.6
FACIT-fatigue score	32.1 ± 12.5	32.4 ± 14.6	0.9
Creatinine	0.7 ± 0.3	0.9 ± 0.3	0.1
Hemoglobin	12.5 ± 1.2	11.5 ± 1.4	0.02
Erythrocyte sedimentation rate	19.1 ± 16	29.7 ± 16.9	0.03

RA: Rheumatoid arthritis; ADL: activities of daily living; IADL: instrumental activities of daily living; HAQ: Health assessment questionnaire; VAS: visual analog scale.

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Catastrophic Antiphospholipid Syndrome: Onset and Outcome

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Aim. To assess retrospectively the prevalence of catastrophic antiphospholipid syndrome (CAPS) in patients with APS and to determine the long-term outcome of CAPS patients who survived after CAPS.
Methods. Data of 162 pts. with systemic lupus erythematosus (SLE) and with antiphospholipid antibodies (aPL) and 94 pts. with primary APS (PAPS) were analyzed. Brain magnetic resonance, Radio isotope venography, lung perfusion scintigraphy, were performed to confirm the presence of thrombosis. IgG/M anticardiolipin antibodies (aCL), lupus anticoagulant were measured in all patients.
Results. Mean (SD) follow-up was 10.7 (4.6) years and mean age at time of including in the study was 33.0 (11.0) and 35.4 (10.1) years respectively. The development of CAPS was found in 43 pts: 33/160 (23F; 10M) and 10/94 (8F; 2M) respectively. Thirty two (25/33 and 7/10) patients were died. Two of 11 survived CAPS pts. developed thrombosis through 1 year with death event. The analyses of the concomitant factors which may initiate CAPS were assessed. There were SLE flare (n=12), initial menopause (n=2), infections (n=12) including pneumonia (n=7), acute respiratory disease (n=3), food poisoning (n=1), abscess (n=1) as provoking factors in SLE+APS pts. Cancer was revealed in 1 SLE pts and trauma after road accident in 1 SLE pts. Thrombotic microangiopathy as cause of CAPS was found in 3 pts (1 with SLE, 2 with PAPS). Fulminant purpura was at onset of CAPS in all 3 cases. Two of them had recurrent severe skin necrosis with multiple organ failure and died due to severe sepsis thru 1 and 2 years. Triggering factor in PAPS pts. was pneumonia (n=2) and abscess (n=1), in 7 pts these factors were not detected. A multivariate regression model confirmed that male

sex (HR 1,83, p=0.04), age of first symptoms under the 40 years (HR 1,0, p=0.04) and valvular heart disease (HR 2,5, p=0.01), are independent risk factors for thrombosis in studied patients. Treatment comprised high dose steroids, full anticoagulation and immunosuppressant in majority, antibiotics administered when infection were evident. High dose IV gamma globulins were added in two cases and sandostatin was used in 1 pts. due to thrombosis of lien vein and pancreatitis.
Conclusion. Triggering factors of CAPS were flare of SLE and infection. Significant failure impairment due to initial CAPS had all survival CAPS pts. Independent predictors of thrombosis for APS patients were male sex, age of first symptoms under the 40 years and valvular heart disease. Patients with APS still develop significant morbidity and mortality which requires a dynamic observation.
Keywords. Systemic lupus erythematosus, antiphospholipid syndrome, antiphospholipid antibodies, catastrophic antiphospholipid syndrome.

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Anxiety and Depression Predict Quality of Life in Turkish Patients with Systemic Lupus Erythematosus

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Objective. The aims of our study were to evaluate quality of life (QoL) in systemic lupus erythematosus (SLE) patients compared with healthy controls and assess impacts of disease activity and psychological distress on health related quality of life (HRQoL) in Turkish SLE patients.
Methods. The Medical Outcomes Study Short Form (SF)-36 was used in a cohort of 113 consecutive patients with SLE and forty-seven age and gender matched healthy subjects to measure HRQoL. Patients' disease activity was assessed according to the SLE disease activity index (SLEDAI). Psychological distress in all participants was assessed by the Hospital Anxiety and Depression Scale (HADS). At the time of HRQoL and HADS testing patients' demographic and clinical data were also recorded. Multiple logistic regression analysis was performed to explore the relationships between demographics, disease duration, disease activity as well as psychological (anxiety and depression) variables and the HRQoL.
Results. SLE patients have lower quality of life than healthy controls. No relationship between HRQoL and SLE activity or disease duration were found. Patients with anxiety and/or depression reported worse SF-36 scores than those without psychological distress. The results of multivariate analysis suggested that HADS-A, HADS-D scores and working status were associated with the impairment of HRQoL.
Conclusion. HRQoL in SLE patients cannot be measured exactly with present measures of disease activity and patients' mental well-being should be taken into consideration. Physicians should pay more attention on detecting and managing anxiety and depression for increasing quality of life in SLE patients.

Keywords. Systemic lupus erythematosus, health-related quality of life, anxiety, depression, psychological distress.

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Frequency of Urınary Tract Infectıons in Prımary Sjögren's Syndrome

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Background. Sjögren's syndrome (SS) is one of the most frequent autoimmune diseases which affects exocrine glands. The symptoms are xerostomia, xerophtalmia and xerodermia which are called sicca complex. Also genitourinary symptoms are seen frequently.
Objectives. In this study, the frequency of urinary tract infection (UTI) in Primary Sjögren's Syndrome patients and the cause of genitourinary symptoms were evaluated.
Methods. The data were collected from 107 consecutive primary Sjögren's syndrome patients (mean age 50,7+ 11,6 year, 100 % women) and 53 healthy individuals (mean age 46,8+ 15,5 year, 100 % women) as healthy control group. 40 consecutive rheumatoid arthritis (RA) patients (mean age 51,7+ 14,2 year, 100 % women) were selected as diseased control group. Symptoms of urinary tract infection and risk factors were assessed within each subject. The cultures of urine samples were analyzed. The American Urological Association's symptom scoring questionnaire (AUA7) were conducted to participants.
Results. Cultures were positive for bacterial growth in 18 primary SS patients (16,8%), 8 rheumatoid arthritis patients (20%) and 2 healthy individuals (3,7%) (SS vs healthy control p=0,013, SS vs RA p>0,05). The isolated pathogens in SS patients were Escherichia coli (E.coli), enterococcus, klebsiella, streptococcus and candida and all of them were usual lower urinary tract infection pathogens. In 3 cultures, extended spectrum β lactamase (ESBL) was positive. Asymptomatic bacteriuria wasn't detected in any SS patients. The highest AUA7 scores were observed in SS patients (SS vs healthy control, median 4 vs 2, p=0,031). Genital dryness symptom were observed in 19 (17,8%) SS patients who had higher AUA7 score. There was no correlation between these symptoms and urinary tract infection.
Conclusions. Urinary tract infections are seen more frequently in SS patients compared to healthy subjects. Frequent urinary symptoms in SS patients may delay the diagnosis of urinary tract infection. Especially for patients on immunosuppressive treatments, UTI should be carefully surged in order to reach early diagnosis and prevention.
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Keywords. Primary Sjögren's syndrome, rheumatoid arthritis, urinary tract infection, bacteriuria.

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Lupus Nephritis: Severity Factors

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Introduction. Because of its frequency and severity, kidney impairment is a major manifestations of lupus disease, the diagnosis and early treatment condition prognosis.
We try through this study to determine the epidemiological, clinical, biological, histological, therapeutic and evolutionary lupus nephritis (NL), and research factors of defavorable kidney prognosis.
Patients and Methods. This is a retrospective study of 44 cases of NL hospitalized within the rheumatology department of BenAknoun,for the period ranging from January 2000 to December 2014, the diagnosis of SLE was chosen according to ACR criteria 1997. NL diagnosis was proven by kidney histology in 37 patients, and it was retained on the clinical and laboratory criteria for the other 7.
Outcomes. The average age of our patients at the discovery of lupus nephritis was 32, 55±11 years (17 years to 63 years). The sex ratio was 10 woman for a man, with a median time to appear of 4.58±5.04 NL years, at the admission 29.54% of our patients had hyper blood pressure and 22.7% had renal failure in which 3 have progressed to end-stage renal disease (ESRD). Proteinuria was positive in all patients with an average of 2.84±1.95g/24 h associated with microscopic hematuria in 38.6% of cases, concerning the immunologic profile 33 of our patients had AAN >1/1000,36 had positive antiDNA,29 had positive anti SM and 15 had anti phospholipid anti bodies. Histologically, 37 of our patients under went renal biopsy, proliferative glomerulonephritis was the most frequent kidney lesion; especially Class III which were the most frequent representing 48.6% of cases and class IV are representing 27% of cases. Other anatomopathologic allusions such tubulo- interstitial and vascular impairment were also observed in 19 patients. Thirty-three of our patients have benefited from a leading treatment with corticosteroids and cyclophosphamide followed by maintenance treatment also based on immunosuppressants. The evolution of our patients was marked by a complete remission in 52.2% of cases, incomplete remission in 34.1% of cases, lack of remission in 15.9% of cases, evolution to ESRD (IRT) in 6.8% of cases and relapses were observed in 41% of cases. Age less than 30 years (p<0.02), the presence of renal failure (p<0.02), microscopic hematuria (p<0.02) and anemia (p<0.01) are considered like severity factors associated with a defavorable prognosis in lupus nephritis.

Conclusion. The evolution to end-stage renal disease is the fear of any practitioner. Despite proper care, this complication is inevitable in patients with signs of histological activity and evaluative clinical manifestations that is why it is important to identify factors associated with defavorable kidney prognosis especially those in which we can act and correct as late diagnosis, lack of remission and relapse occurred, and also to adapt the type and intensity of immunosuppressive therapy initiated.
Keywords. Systemic lupus erythematosus, lupus nephritis, end-stage renal disease (ESRD).

P-145

The Clinical Significance of Rarely Seen Patterns of Anti Nuclear Antibodies

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Background. Anti nuclear antibodies (ANA) are one of the key diagnostic analyse for autoimmune diseases in rheumatological practice. The staining patterns of ANA include two main subgroups; nuclear and cytoplasmic staining patterns. In clinical practice the main five nuclear staining patterns (homogeneous, peripheral, granular, centromere, nucleolar)are used for diagnosis. The clinical significance of cytoplasmic patterns is unclear.
Aim. We aimed in this study to determine the clinical significance of rarely seen ANA staining patterns.
Method. Our study group is consisted of 224 patients (40 male, 184 female) who admitted with arthralgia to rheumatology outpatient clinic and found ANA positivity with the titer at least 1/320. ANA analysing was performed with IFA (Euroimmun) and ENA with immune blot (Euroimmun).
Results. The frequency of homogeneous pattern was 13,8%, granular pattern 19,6%, cytoplasmic pattern 17%, centromer 5,4%, nucleolar 16,5%, nucleolar granular 4,9%, nucleolar homogenous 4,9%, mitbody 10,3%, actine 4,5%, vimentin 3,1%, tropomyosin 0,9%, fibrillarin 1,3%, peroxisomes 2,2%, pcna 1,8%, golgi 2,7%, spindle fiber 3,6%, lamin 2,2%, centriol 3,6%, ribosomal-p 2,7%, mitochondrial 1,8%. The distribution of ANA patterns according the clinical findings is shown in Table I. We found that rarely seen patterns could be associated with autoimmune diseases. Cytoskeleton related patterns are associated with SPA in comparing the other patterns. Nucleolar homogeneous, nucleolar granular, golgi and mitochondrial patterns are found the most specific patterns in our study. The most RA associated patterns are found homogeneous and mitbody patterns. The most nonspecific patterns were granular in common patterns and centriol in rare seen patterns.
Conclusion. The rarely seen patterns may be significant for autoimmune diseases. The titer and the descriptive pattern information should be reported for rarely seen patterns.
Keywords. Anti nuclear antibody, staining patterns, clinical significance.

Table I. The association of ANA staining patterns with diseases.

Pattern	n	SLE	SJS	JIA	RA	UCTD	SPA	SCL	MCTD	PSA	Other	Nonspecic
Granular	44	5	3	1	7	5	6	4	2	-	4	8
Cytoplasmic	38	4	3	1	8	2	2	3	1	-	3	11
Nucleolar	37	3	2	1	5	3	8	2	1	1	4	6
Homogeneous	31	4	2	1	14	2	3	-	-	-	1	5
Mitbody	23	-	1	-	6	-	3	-	1	1	-	4
Nuc. Homo.	11	2	-	-	3	1	-	3	-	1	1	-
Nuc. Gr.	11	1	-	-	3	1	1	1	-	1	3	-
Actine	10	1	-	-	2	1	4	1	-	-	-	2
Spindle fiber	8	-	1	-	1	-	2	2	-	-	-	2
Centriol	8	-	-	-	1	2	-	-	-	-	-	5
Vimentin	7	1	-	-	1	1	2	-	1	-	-	2
Rib-P	6	1	1	1	-	-	-	-	-	-	-	3
Golgi	6	-	-	1	1	1	4	-	-	-	-	-
Lamin	5	-	1	-	2	-	1	-	-	-	-	1
Peroxisome	5	-	-	-	2	-	-	1	-	-	-	2
Mitochondrial	4	1	3	-	-	-	-	-	-	-	-	-
PCNA	4	-	-	-	1	-	-	2	-	-	-	1
Fibrillarin	3	1	-	-	1	-	-	-	-	-	-	1
Tropomyosin	2	-	-	1	-	-	-	-	-	-	-	1

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Primary Sjögren's Syndrome is Characterized by Impaired Degradation and Increased Phagocytosis of Necrotic Cell Debris in the Peripheral Blood

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Aberrant removal of necrotic debris is a feature of SLE with inflammatory consequences. We have recently shown that SS and SLE patients (but not RA) manifest significantly increased uptake of secondary necrotic cell remnants (SNEC-phagocytosis) by blood-borne monocytes, which correlates with the severity indices of these diseases. Herein, we sought to define the critical factors involved in this aberration.
Whole blood, PBMC and/or sera from SS, SLE and RA patients and healthy blood donors (HBD) were comparatively studied. Total serum IgG was isolated by negative selection (Melon Gel Resin columns). SNEC were prepared by heat-induced necrosis of normal lymphocytes and propidium iodide labelling. Samples were assessed for serum DNase1 activity (by single radial enzyme-diffusion assay), serum DNase1 protein levels (by ELISA), cell-free DNA in serum samples (by RT-PCR), IgG anti-SNEC antibodies (by flow cytometry) and/or SNEC-phagocytosis and SNEC degradation (by flow cytometry). The influence of serum components on SNEC-phagocytosis was assessed in cross-admixture experiments using healthy or patients' phagocytes and SNEC pre-incubated with whole sera or purified serum IgG from patients or HBD.
In cross-admixture experiments, the sera of SS and SLE patients (but not RA) induced significant SNEC-phagocytosis by healthy monocytes that correlated positively with the levels of IgG anti-SNEC antibodies (r= 0.576, p=0.0026), and inversely with the levels of DNase1 activity (r= 0.634, p<0.0001) in those sera. In line with this, the inhibition of DNase1 in HBD sera by G-actin was found to lead to significantly diminished SNEC degradation and increased SNEC uptake by healthy phagocytes (p=0.0009), supporting the important physiologic role of serum DNase1 in the prevention of SNEC-phagocytosis. Similar levels of DNase1 mRNA in PBMC and of serum DNase1 protein were found in patients and controls. Significantly increased levels of cell free-DNA were observed in the sera of SS (median [range] ng/ml: 64 [16-150) and SLE patients (27.8 [5.5-78.0]) compared to HBD (12.1 [5.7-19.4]) and RA patients (8.6 [3.8-9.4]) and correlated inversely with serum DNase1 levels (r= -0.752, p<0.0001).The addition of purified serum IgG from SS or SLE patients to HBD serum prevented the physiologic SNEC degradation and induced increased uptake of SNEC by healthy phagocytes, most likely due to the "shielding" of SNEC against digestion by DNase1 of HBD serum. SNEC pretreatment with IgG from SS or SLE patients lead to markedly increased SNEC-phagocytosis by healthy monocytes (p<0.0001). Finally, under serum-free conditions, the monocytes from SS and SLE patients manifest significantly increased SNEC-phagocytosis, compared to HBD (p=0.0002).
Upon cell necrosis, the immune system of SS and SLE patients may be overly exposed to the necrotic debris. This aberration primarily owes to impaired serum DNase1 activity and IgG anti-SNEC autoantibodies and secondarily to activated monocytes.
Keywords. Primary Sjögren's syndrome, Systemic lupus erythematosus, necrotic cell debris, SNEC, degradation, phagocytosis, DNase1.

P-147

Psychiatric Morbidity in Systemic Lupus Erythematosus Patients

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Background. Psychiatric morbidity including affective (anxiety-depressive spectrum) and psychotic disorders occur in systemic lupus erythematosus (SLE) patients very often. The frequency of psychiatric symptoms appears to be increasing because of both better screening and improved physician awareness. Psychiatric syndromes in SLE can be caused by direct CNS involvement, infection, drugs side effects, psychogenic reaction to psychosocial/chronic illness stressors.
Objective. To analyze the prevalence of psychiatric disorders in SLE patients.
Methods. 180 patients with SLE were enrolled in this study. All of the patients

met the American College of Rheumatology revised criteria for SLE classification. 154 patients evaluated were women (85,6%) and 26 – men (14,4%), with a mean (M±m) age of 34,6±0,93 yrs and disease duration of 134,9±8,8 months. The patients' disease activity was assessed using the SLEDAI scoring system. Mean SLEDAI score was 9,13±0,63 points. 164 (91,1%) patients were taking prednisone in mean dose 19,3±1,11 mg per day; 73 (40,6%) - cytotoxic drugs (cyclophosphamide, azathioprine or mycophenolate mofetil); 96 (53,3%) were taking hydroxychlorochine.
Psychiatric disorders were diagnosed by psychiatrist in accordance with the ICD-10 after structured interview. Psychiatric and psychological scales and methods used: Hospital Anxiety and Depression Scale for screening, Hamilton Anxiety Rating Scale, Montgomery-Asberg Depression Rating Scale and projective and neuropsychological methods for evaluation of cognitive functions.
Results. Psychiatric disorders were found in 142 (78,8%) patients. Anxiety-depressive spectrum disorders prevailed (74,5%): depressive episode had 44 patients (24,4%) (including recurrent depressive disorder in 26 (14,4%)); dysthymia - 46 (25,6%); adjustment disorders - 34 (18,9%); generalized anxiety disorder - 10 (5,6%). 6 (3,3%) patients had delirium and 4 (2,2%) - schizotypal disorder. Mild cognitive impairment was revealed in 65 (36,1%) patients. The patients with and without psychiatric disorders did not differ significantly on the age, duration of illness, gender, disease activity (SLEDAI score) and cumulative dose of prednisone. However significantly more (p=0,0014) patients with psychiatric disorders had CNS-active lupus other than psychiatric (32,1% vs 7,9%). 72 (40%) SLE-patients had mood disorders before SLE onset. 121 (67,2%) patients had stressful life events during 12 months before SLE onset and 134 (74,4%) - during 12 months before the last SLE exacerbation.
Conclusion. The results showed high prevalence of psychiatric, especially anxiety-depressive spectrum disorders in our SLE patient sample. Most of the investigated individual and morbid parameters with respect to age, gender, duration of illness, lupus activity and use of steroids were not related to psychiatric disorders. Stress events can be the main cause of majority mood disorders in SLE patients.
Keywords. Systemic lupus erythematosus, psychiatric disorders, stressful life events.

P-148

Interferon Alpha Linked to Abnormal Lipid Processing in Systemic Lupus Erythematosus

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Background. It is a fact that type I interferon (IFN), such as interferon alpha, have an important role in the pathogenesis of systemic lupus erythematous (SLE). They are key effectors molecules of the innate immune system, being involved in a lot of aspects of SLE, including premature atherosclerosis. Lupus dyslipidemia is an important contributor to this early vascular involvement. HDL cholesterol regulates MFG genes (type I IFN) that links innate immunity and cardioprotection via TLR4.
Objective. to evaluate relation of two IFN alpha genes with an important vascular risk factor in SLE: lipid metabolism.
Material and Methods. we evaluated 20 patients with SLE admitted in SF Maria Hospital and 12 matched by gender and age healthy donors. All subjects gave informed consent for all procedures. We performed a complete clinical and paraclinical evaluation of SLE patients. Quantitative polymerase chain reaction (PCR) was performed from peripheral mononuclear cells (PBMCs) in order to evaluate two gene part of the IFN alpha genes: IFIT1 and Mx1. The statistical analysis was made with SPSS programme.
Results. mRNA expression of both IFN alpha genes evaluated in this study were significant higher in SLE than in healthy donors (p 0.02 for IFIT1 and p 0.01 for Mx-1). Their expression were direct correlated with level of total cholesterol and LDL-cholesterol and inverse correlated with HDL-cholesterol, as shown in Table I.
Conclusions. IFN alpha over expression is link also to abnormal lipid processing in SLE and this contributes to early atherosclerosis. Statins could ameliorate also immune dysregulations in SLE.
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Keywords. Interferon alpha, early atherosclerosis, lipid metabolism.

Table I. Correlation between lipid metabolism and IFN alpha genes expression.

		IFIT-1	Mx-1
CHO	r	0.635	0.508
	p	0.011	0.044
LDL	r	0.627	0.557
	p	0.012	0.025
HDL	r	-0.568	-0.638
	p	0.027	0.008
TG	r	0.651	0.651
	p	0.009	0.006

CHO: cholesterol; LDL: LDL-cholesterol; HDL: HDL- cholesterol; TG: triglycerides.

P-149

The Multiple Auto-Immune Syndrome

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P-150

Health-Related Quality of Life measured by LupusQoL© and SF-36 in Turkish patients with Systemic Lupus Erythematosus

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Objective. This study assesses the value of disease-specific LupusQoL© questionnaire, compares it with a general QoL scale, SF36 and evaluates whether LupusQoL© correlated with demographic characteristics, disease duration and activity of Turkish SLE patients.
Methods. Consecutive patients with lupus followed in our outpatient clinic were enrolled to the study. The SF-36 and LupusQoL© questionnaires were applied on the same day with the clinic visits. Disease activity was measured by Systemic Lupus Erythematosus Disease Activity Index (SLEDAI). We examined the correlation between four comparable domains of two questionnaires and the correlation of each non-comparable domain of LupusQoL© with the Physical Component Summary scores (PCS) and the Mental Component Summary scores (MCS) of the SF-36. Associations between eight LupusQoL© and SF-36 domains and age, disease duration and disease activity were also determined. Descriptive statistics, Pearson's correlation coefficients and student's t test were performed to analyse the data.
Results. A total of 113 patients (F/M:108/5, mean age: 40.6±11.9 yrs, mean disease duration: 8.46±7.0 yrs) were included and 74% (n=84) of these were active. Median SLEDAI score was 2 (0-24), global LupusQoL© score was 60.85±23.34 and global SF-36 score was 41.21±9. There was a significant correlation between LupusQoL© and SF-36 global scores (r=0.83; p=0.000). The comparable domains of both questionnaires correlated well and there was a correlation between the 4 non-comparable domains of LupusQoL© and the PCS and MCS of SF-36. QoL assessed by LupusQoL© and SF-36 did not correlate with disease activity (r= -0.03; p=0.67 and r= -0.01; p=0.86, respectively).
Conclusion. LupusQoL© and SF-36 questionnaires have the similar efficiency for measuring quality of life in patients with SLE. However, LupusQoL© and SF36 were not associated with SLEDAI scores, suggesting QoL in clinically inactive or mildly active patients might be affected by other factors beside the disease activity.
Keywords. LupusQoL©, SF-36, systemic lupus erythematosus, quality of life.

P-151

Diffuse Alveolar Hemorrhage: A Life-Threatening Complication of Systemic Lupus Erythematosus

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Background. Diffuse alveolar hemorrhage (DAH) or pulmonary hemorrhage (PH) may occur in 2-5% of Systemic Lupus Erythematosus (SLE) patients and is associated with a high mortality rate (%79-90). In 1985, Abud-Mendoza et al. published criteria for diagnosis of PH: 1) dense alveolar infiltrates involving at least ¾ of the lung tissue in chest X-ray, 2) acute respiratory failure, 3) a descent in hemoglobin level (>3 g/dl). Hemoptysis can occur in 58% of cases. In patients without the classical triad, computed tomography (CT) images can confirm the diagnosis. Bronchoscopy is another valuable test which can confirm PH and show the origin of bleeding. Among rheumatologic diseases DAH can most frequently occur in systemic vasculitis and SLE. Active lupus nephritis with hypoalbuminemia is a major risk factor for DAH. Clinically and radiologically DAH can mimic acute respiratory distress syndrome (ARDS) and severe pneumonia. DAH treatment includes high dose corticosteroids, cyclophosphamide and plasmapheresis.
Here we would like to present diffuse alveolar hemorrhage in a patient with active SLE and antiphospholipid syndrome.
A 39 years old female patient was admitted to emergency department with rapidly progressive dyspnea, hemoptysis and chest pain. She had history of recurrent pregnancy loss, deep vein thrombosis and had been hospitalized for pulmonary embolism one year ago. Her laboratory tests revealed anticardiolipin IgG positivity, low complements and elevated anti-double-stranded DNA titer. Chest X-ray revealed bilateral pulmonary infiltrates (Figure: a). Thorax CT revealed diffuse alveolar opacities, crazy paving pattern and areas of consolidation (Figure: b). In emergency department her dyspnea and oxygen desaturation worsened. She was transferred to intensive care unit and was intubated. DAH due to SLE was diagnosed and intravenous methylprednisolone 1000 mg was given for 3 days. 1000 mg cyclophosphamide was administered. 1 mg/kg methylprednisolone was given for maintenance. Her clinic improved, she was weaned off ventilatory support. No further hemoptysis episodes occurred. Chest X ray revealed resolution of the opacities (Figure: c).
Conclusions. Diffuse alveolar hemorrhage is a rare but life threatening complication of SLE and can be successfully treated with pulse corticosteroids and cyclophosphamide.

Chest X-rays and Thorax CT images

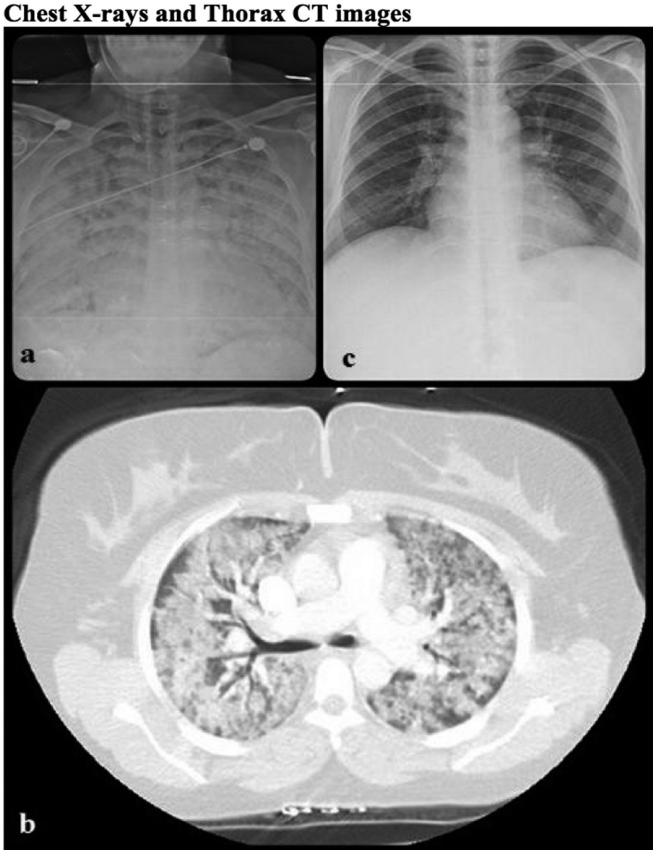

Fig. a. Bilateral pulmonary infiltrates in chest X-ray before treatment. **b.** Diffuse alveolar opacities, crazy paving pattern and areas of consolidation in thorax CT. **c.** Opacities completely resolved 2 weeks after the treatment.

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Keywords. Diffuse alveolar hemorrhage, Systemic Lupus Erythematosus, Pulmonary hemorrhage.

P-152

The Prevalence and Clinical Significance of Serum Anti-Cyclic Citrullinated Peptide Antibodies in Primary Sjögren's Syndrome

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Background. Although anti-cyclic citrullinated peptide (anti-CCP), is a specific marker for rheumatoid arthritis (RA), it can be found positive in several other rheumatic diseases and even in healthy people. There are studies showing that anti-CCP can be used as a guide for RA patients for early diagnosis, prognosis and the treatment modalities.
Objective. This study aims to determine the prevalence and clinical significance of anti-CCP in patients with primary Sjögren's syndrome (SS) in the Turkish population.
Methods. 82 patients with primary SS, 100 RA patients and 100 healthy controls, who are between 35-50 years of age and referred to the Rheumatology outpatient clinic from October 2011 to June 2013, were studied. For the diagnosis of Primary SS the AECG 2002 (American - European Consensus Group) criteria, and for the diagnosis of RA, the ACR/EULAR 2010 (American College of Rheumatology/ European League Against Rheumatism) criteria were used. Demographic characteristics, test results and anti-CCP were compared between the patients and control group.
Results. 96.3 % (n=79) of patients with SS were female, 3.7% (n=3) were male and female / male ratio was 26.3/1. In our study, the most common extraglandular finding in SS patients was joint involvement [80.5% (n = 66)]. In SS patients,14 (53.8%) had renal involvement, 6 (23.0%) had Raynaud's phenomenon, 3 (11.5%) had neurological involvement, 1 (3.8%) had pulmonary involvement and 1 (3.8%) had both renal and skin involvement and one had Non-Hodgkin's Lymphoma (3.8%). Anti-CCP>20 IU/mL has been accepted as positive. Group comparisons demonstrated that anti-CCP positivity was significantly different between SS and RA groups (χ^2=53.283; p<0.001), SS and control groups (χ^2=6.488; p=0.011), and RA and control groups (χ^2=77.778; p<0.001) (Table II). Also, the level of anti-CCP was positively correlated with ESR, CRP and negatively with MPV. In SS patients in our study, there was no relation between anti-CCP with joint involvement and renal involvement.

Table I.

Variables	Sjögren median(IQR)	RA median(IQR)	Control median(IQR)	χ2	P
Age	49.0 (11.0)	50.0 (21.0)	41.5 (14.0)	24.171	<0.001
Hb	13.1 (1.8)	13.0 (2.2)	14.0 (2.2)	17.786	<0.001
MPV	9.8 (2.1)	9.4 (1.8)	10.8 (1.07)	59.207	<0.001
ESR	24.0 (26.0)	36.0 (36.0)	14.0 (17.0)	37.475	<0.001
CRP	0.5 (1.8)	1.6 (3.6)	0.3 (0.5)	67.397	<0.001
RF	18.1 (25.0)	24.1 (91.8)	20.0 (0.0)	18.559	<0.001
anti-CCP	7.0 (0.0)	68.3 (387.4)	7.0 (0.0)	113.909	<0.001

Age and some laboratory variables, according to the groups.

TableII.

	Sjögren n (%)	RA n (%)	Control n (%)	χ2	p
Anti-CCP positive	4 (4.9)	56 (56.0)	0 (0.0)	112.176	<0.001

Comparison of groups for the frequency of anti-CCP positivity.

Conclusion. Our study is the most wide-ranging study in detecting the prevalence of anti-CCP in primary SS in Turkish population. Primary SS patients with anti-CCP antibody-positivity should be closely monitored due to the possibility of development RA or other autoimmune diseases in the future. Discussion: There is only one study evaluating the prevalence of anti-CCP antibodies in Turkey. In that study 46 RA patients, 32 pSS patients and 22 granulomatosis with polyangiitis patients were evaluated for the frequency of anti-CCP antibody positivity. In pSS patients one patient(3%)has been found to be anti-CCP positive(1).

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Keywords. Primary Sjögren's syndrome, rheumatoid arthritis, anti-cyclic citrullinated peptide

P-153

Factor Xa Reactive Antibodies in Patients with Systemic Lupus Erythematosus and Antiphospholipid Syndrome Have Differential Effects Upon Coagulation Assays

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Background. Antiphospholipid antibodies have been shown to bind serine proteases (SP) involved in the coagulation cascade. Previously, we found that IgG anti-Factor(F)Xa antibody levels were higher in patients with the antiphospholipid syndrome (APS) and patients with systemic lupus erythematosus (SLE) but no APS compared with disease and healthy control (HC) groups. Given that FXa has important haemostatic and cellular effects we hypothesized that anti-FXa antibodies may be important in the pathogenesis of APS and SLE. In this work, we investigated whether differences exist in the avidity and functional effects of APS and SLE anti-FXa IgG upon the coagulant functions of FXa.

Methods.

IgG was purified from patients with APS (n=15) and SLE (n=15) who had medium or high serum levels of anti-FXa binding and HC (n=10) negative for anti-FXa IgG. The avidity of IgG-FXa binding was measured under chaotropic conditions using a NaCl gradient. We measured effects of anti-FXa IgG on FXa-activated clotting time (ACT) and on FXa enzymatic activity in a chromogenic assay in the absence and presence of antithrombin (AT)III. Binding to AT-III was tested by a novel ELISA developed in our laboratory.

Results. All SLE-IgG displayed significantly lower (less than 25% binding) avidity compared to APS-IgG (25-70% binding) to FXa at 0.13 to 1M concentrations of NaCl ($p<0.05$). The mean residual binding of APS-IgG to FXa was significantly higher than that of SLE-IgG below 2M NaCl (26 vs 13%; $p<0.05$ at 1 M). FXa enzymatic activity was significantly reduced by APS-IgG (90%) and SLE-IgG (92%) compared to HC-IgG (98%) (APS vs HC $p<0.05$, SLE vs HC $p<0.05$, APS vs SLE $p=0.04$). ATIII mediated inhibition of FXa however, was significantly reduced by APS-IgG (62%) compared with HC (79%) and SLE (81%) ($p<0.05$). To see whether APS IgG also bound to AT-III, samples were tested by a novel ELISA and only 4 APS samples were found to bind AT-III weakly. To see whether APS and SLE samples bound to different epitopes on FXa, the chromogenic assay was repeated by mixing different APS and SLE samples at equal concentrations. Results showed that some combination of samples increased the inhibition of FXa compared to effects of samples alone. The greatest prolongation of FXa-ACT was observed with APS-IgG followed by SLE-IgG and HC-IgG (74, 63 and 26 sec respectively).

Conclusion. FXa reactive IgG isolated from patients with APS displayed higher avidity binding to FXa and had greater functional effects upon FXa activity and ATIII mediated inhibition of FXa. Work is now underway to further characterise the cellular effects of these anti-FXa IgG.

Keywords. Antiphospholipid syndrome, systemic lupus erythematosus, serine protease, Factor Xa.

P-154

Elevated Igg4 Serum Levels Among Primary Sjögren's Syndrome Patients: Do They Unmask Underlying Igg4-Related Disease?

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Background. IgG4 related disease (IgG4-RD) and primary Sjögren's syndrome (pSS) share some common clinical, serological and histopathological characteristics.

Objectives. To determine whether a subset of primary Sjögren's syndrome patients fulfill the recently proposed criteria for IgG4 related disease.

Methods. IgG4 serum levels were measured in 133 pSS patients in 49 healthy blood donors (HBD), in 74 systemic lupus erythematosus and in 54 rheumatoid arthritis (RA) patients. IgG4 (+) plasmacytes were counted by immunohistochemical analysis in paraffin-embedded minor salivary gland (MSG) tissues.

Results. Raised IgG4 serum levels (>135mg/dl) were detected in 10 out of 133 pSS patients (7.5%), ["High-IgG4" group], in 8 out of 74 lupus patients (10.8%), in 7 out of 54 (12.9%) RA patients and in one out of 49 HBD (2%). Compared to the"Normal-IgG4" pSS group (IgG4 serum levels <135mg/dl), "High-IgG4" patients exhibited increased prevalence of IgG4-related features (autoimmune cholangitis and pancreatitis, interstitial nephritis) ($p=0.009$), lower rates of ANA positivity ($p=0.03$) and higher IgG2 ($p=0.02$) and IgE ($p=0.04$) levels. When the cut-off for serum IgG4 positivity was defined as 270 mg/dl, the corresponding rates were 5 out of 133 (3.7%) for pSS, 3 out of 74 (4.1%) for SLE, 1 out of 54 for RA (1.9%) and 0 out of 49 for HBD (0%). Positive staining for IgG4 plasma cells, with an IgG4/IgG ratio >=40% and a mean incidence of 22 IgG4 (+) plasmacytes/hpf were detected in 3/5 available MSG tissues in the "High-IgG4" group and in 0/6 MSG biopsies of "Normal-IgG4" group. Criteria of possible or definite IgG4-RD were fulfilled by 10 out of 133 (7.5%) of our pSS cohort.

Conclusions. Criteria for IgG4-RD were fulfilled by a small number of our pSS patients characterized by high prevalence of IgG4-related clinical, serological and histopathological features. Whether they represent a distinct subtype of Sjögren's syndrome or misclassified IgG4-RD patients remains to be elucidated by further studies.

Keywords. Sjögren's syndrome, IgG4-related disease, IgG4-related sialadenitis.

P-155

Clinical and Laboratory Predictors of Distinct Histological Classes of Lupus Nephritis – Can They Substitute the Renal Biopsy?

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Background. The type of histological class of lupus nephritis dictates treatment approaches among lupus patients with renal involvement. Risk stratification may facilitate therapeutic decisions, when renal biopsy is contraindicated or poses high risk.

Objective. To explore whether distinct clinical, serological and urinalysis findings may predict the specific histological types of lupus nephritis.

Methods. Clinical and laboratory features were recorded at the time of evident renal involvement (defined as proteinuria>250mg in 24h urine or active urine sediment in urinalysis) from 297 consecutive patients with biopsy-confirmed lupus nephritis. Univariate and logistic regression analyses were performed and a risk score was developed to estimate the risk for developing different histological lupus nephritis classes.

Results. Variables independently associated with type II class included: absence of malar rash (p=0.05), anti-dsDNA ($p=0.01$) and urine leucocytes<=5/hpf ($p=0.04$); with III/IV: age of nephritis diagnosis <=32 years old ($p=0.02$), presence of musculoskeletal (MSK) manifestations ($p=0.001$), new-onset hypertension ($p=0.04$), positive anti-dsDNA ($p=0.001$), urine leucocytes >5/hpf ($p=0.005$), creatinine levels>1.2mg/dl (p=0.03), cellular casts>1/hpf ($p=0.04$), absence of nephrotic range proteinuria (NRP) ($p=0.001$); with type V: age at nephrtis diagnosis>32 years ($p=0.009$), malar rash ($p=0.003$), absence of MSK complaints ($p=0.003$) or serum C3 hypocomplementemia ($p=0.02$), NRP

(p<0.001) and urine erythrocytes<=9 /hpf (p=0.01). A risk score for the prediction of specific histological classes was calculated for each patient. OR [95%CI]) (>=2 risk factors) was 6.7 [2.8-17.4] for type II nephritis, 15.6 [5.1-47.8] and 8.2 [3. 6-19.0] for types III/IV and for type V, respectively (>=3 risk factors). ROC curves developed for the predictive models revealed that the area under the curve was 0.72 (p<0.001) for type II, 0.83 (p<0.0001) for type III/IV and 0.76 (p<0.0001) for type V nephritis.
Conclusions. The identification of independent factors associated with specific types of lupus nephritis and a risk score for prediction can provide guidance in selecting specific therapeutic modalities, particularly in cases where renal biopsy is contraindicated.
Keywords. SLE, Nephritis, Renal biopsy.

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Predicting the Outcome of Sjögren's Syndrome-Associated Non-Hodgkin's Lymphoma Patients

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Background/Objectives. Non Hodgkin lymphoma is the most detrimental complication of Sjögren's syndrome (SS). Although up to date various studies have established risk factors for lymphoma development, this is not the case as far as prognostic factors for lymphoma outcome are concerned. The aim of the current study is to identify potential prognostic factors in SS-associated non-Hodgkin's lymphoma (NHL) patients.
Methods. We examined the effect of SS-activity (defined as the EULAR SS disease activity index-ESSDAI) in the prognosis of SS-related NHLs. Prognosis was defined in terms of overall and event-free survivals (OS and EFS). An event was defined as lymphoma relapse, treatment failure, disease progression, histological transformation or death. The effect of NHL clinical and laboratory characteristics was also investigated. A cohort of 77 SS-associated NHL patients was considered.
Results. MALT lymphomas constituted the majority (66.2%) of lymphomas. During the follow-up (median=57.93 months), the 5-year OS was 90.91% (95%CI: 82.14-95.80%) and the EFS was 77.92% (95% CI: 67.37-85.82%). Patients with high ESSDAI score had a greater risk for death (OR=5.241, 95%CI: 1.034-26.568) or for event (OR=4.317, 95%CI: 1.146-9.699, p=0.008). These patients had also significantly worse EFS (HR=4.541, 95%CI: 1.772-11.637) and OS (HR=5.946, 95%CI: 1.259-28.077). In addition, post-chemotherapy ESSDAI improvement was significantly lower in patients who had experienced an event (p=0.005). An unfavorable IPI score (high-intermediate/high) was associated with high risk of death and event (OR=13.867, 95%CI: 2.656-72.387 and OR=12.589, 95%CI: 3.911-40.526, respectively), worse EFS (log-rank p<0.001, HR=8.718, 95%CI: 3.477-21.858), as well as with worse OS (log-rank p<0.001, HR=11.414, 95%CI: 2.414-53.974). After adjustment for identified risk factors, IPI score retained a significant prognostic role following by a strong effect of ESSDAI in survival outcomes.
Conclusion. At the point of NHL diagnosis, IPI and ESSDAI might be proved useful predictive tools in SS-associated lymphoma prognosis.
Keywords. Sjögren's syndrome, Lymphoma, Predictors.

P-157

Assessment of Cardiovascular Risks in Psoriatic Arthritis

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Background. Psoriatic arthritis is a risk factor for cardiovascular disease. The magnitude of the increased risk is similar to that of contemporarily managed diabetes Mellitus. Compared with the general population, patients with psoriatic arthritis have a higher prevalence of obesity, particularly those with severe disease, and are more likely to have the metabolic syndrome. According to NICE guidelines, patients with psoriatic arthritis should be screened for cardiovascular risks on an annual basis, and treated accordingly. This includes assessment of lipid profile, glucose, BMI, blood pressure and smoking status.
Objectives. To evaluate if these patients with psoriatic arthritis are screened and counseled accordingly for particular cardiovascular risk factors.
Methods. 100 Consecutive patients with psoriatic arthritis patients attending the Rheumatology department in MRH, Tullamore, Ireland were included. The most correspondence letter from each patient's electronic medical record was reviewed. We audited whether or not lipid profile, glucose, body mass index (BMI), smoking status had been checked at the last consultation or within the last year. For patients at the last consultation with a documented BMI>30, currently smoking or who were hypertensive, it was recorded if intervention was recorded to address these risk factors.
Results.
We noted that the percentage of occasions that the following parameters were recorded at the last consultation or within the last year was as follows: Lipid profile 48 %, Glucose 17%, Blood pressure 100 %, BMI 100 %, and smoking status 100 %. It was noted that: 26% of patients had a BMI>30 and intervention advice given in 0%; 17% of patients were smokers, and intervention advice given in 76.5%; and 3% of patient were hypertensive: and intervention advice given in 100%.
Conclusions. The results of this audit noted that blood pressure, BMI, and smoking status are regularly recorded in the Rheumatology outpatient department. However lipid profiling and Glucose measurement could be significantly improved. Intervention for detected hypertension was always advised, and smoking cessation advice was given to most current smokers. However it was observed that the difficult decision to advise overweight patients with regards to weight reduction strategies was lacking. The audit has highlighted areas for improvement in our cardiovascular management approach and we plan implement solutions to address these short comings, which could reduce cardiovascular risk.
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Keywords. cardiovascular risks, psoriatic arthritis, spondyloarthritis.

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Attitude of Doctor and Patient to Ankylosing Spondylitis: Questions of Understanding

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Effective control of ankylosing spondylitis (AS) activity involves prolonged drug therapy primarily NSAIDs and active participation of the patient in treatment, performing of recommendations on non-pharmacological treatment. Is it always effective physician-patient interaction in relation to treatment?
The purpose - To identify the most significant problems for AS patient about the disease in order to create a system of effective interaction: physician – AS patient.
Materials and Methods. 30 patients with confirmed AS diagnosis, the average disease duration 5, 7±3,2 years, mean age 34,4±12. 8 years, responded to 10 survey questions regarding their understanding of the disease and treatment issues and the impact on daily life with the need to evaluate the importance of each question on a scale from 1 to 10. Doctors rheumatologists (n=10) and physicians (n=20) answered the same questions from the position what they think is important for patients. Responses were ranked and compared.
Results. Considering the young age of patients, priority for patients and doctors was the outlook for the future (1). Important for doctors and patients were issues related restrictions on daily life (patients - 4 place, doctors - 2nd place) and earning capacity (patients - 3 place, doctors - 5th place). At the same time, doctors underestimate (10th place) the complexity of the patient (2nd place) associated with the need to exercise constantly. Physicians overestimated the importance of persistent pain for patients (4th place) and side effects of drugs (2nd place), patients put on the importance of these issues at 7 and 5th place respectively.
Conclusion. In communicating with the patient doctor needs to pay more attention to the importance of non-pharmacological treatment, in particular right physical exercises. Understanding the patients view to their condition will improve the efficiency of AS control.
Keywords. AS, patient, participation.

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Characteristics of Spondylitis during Chronic Inflammatory Bowel Diseases

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Introduction. The appearance of inflammatory rheumatism during some chronic Enteric is an old concept. these Enteric are mainly ulcerative colitis (UC),and Crohn's disease. Reaching the sacroiliac joints and spine could make a typical model of spondylitis. The target of this work is to identify the clinical and radiological characteristics of joined to CIBD.
Patients and Methods. This is an observational study made between January and April 2013.aimed at patients with spondyloarthropathy carrying the ASAS criteria associated to CIBD. forty six patients were collected
Result. It's about (34.8%) women and(65.2%) men, that's middle age is 33.47±10.5 years old; there was(26.1%) (UC),and (73.91%) crohn disease. The middle duration of CIBD evolution is 14.1 years old. A digestive pathology preceded rheumatic reached in (50%) that is a spondyloarthritis in 100%.the middle age of the beginning is 20,9±8,1 years old. the middle age of evolution is 14,52±16,8 years old. The clinical symptomatology have been pure axial about 52.5%. low back pain dominated the clinical board. The ringroad reached was pure on 8%, polyarticular on 48.7%; oligoarticular on 42.4%; the most affected joints are the knees (30cases), hips and ankles (21cases). The anterior chest joints (15cases), shoulders (9cases). the coxitis was found at 47.5%, it was inaugural in 17.4% of these cases. The during of coming up is 4,8ans±2,5.it was bilateral in 39.1% of these cases. Lequesne index was superior to 11 in more than 80% of cases. The heel pain were presented in 54.3%. there was 7 cases of uveitis, it is posterior in 100% of cases. 15 Patients had sternoclavicular's arthritis. The sacroiliitis is here in 93.5%.it was bilateral in 100% of cases. Of IV stage in 10.8%, Of III stage in 65.5% of cases. Stage II 17.4%. The enthesopathy of pelvis was found in 95.7% of cases. The inflammatory spondylitis were also found in 23.9%. a destruction of carpe was found in 4 cases. We check in all patients the inflammatory syndrome, the medium VS: 66,3±29,55 mm, the medium CRP 24,6±12,509 mg/. The HLA B 27 was performed in 27 patients, he was present in 25.9 %. the BMD was performed in 12 patients, two of them had osteopenia, ten had non- fracturing osteoporotic.
Discussion or (arguing). The middle age of beginning of the symptomatology was quite precocious. The spondylitis is twice common in man. The age of beginning of disease is the similar in both sex. Axial reached is twice common in man. the ringroad reached is polyarticular, symmetrical; the joint more affected: the knees, hips. the coxitis is free from CIBD kind. The membership of HLA B27 group is not so common.
Conclusion. So nearly differences from the CIBD spondylitis carries out a similar board of the a primitive spondylitis.
Keywords. Spondylitis, chronic inflammatory bowel diseases, chronic Enteric, crohn disease.

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There is no Relationship between Glucagon Like Peptide-1 and Inflammation in Psoriasis and Psoriatic Arthritis

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Background. Several studies have found a higher prevalence of type 2 diabetes mellitus in patients with psoriasis and psoriatic arthritis (PsA). Interestingly, a complete remission of psoriasis has been observed following immediately after the gastric bypass surgery in obese diabetic patients before any weight loss could have occurred, most likely due to the increased levels of GLP-1. There have been also diabetic cases that have showed improvements in psoriasis under the treatment with GLP-1 receptor agonists and with dipeptidyl peptidase-IV (DPP-IV) inhibitors. GLP-1 receptors have been shown to be expressed on the numerous immune cell populations and GLP-1 was suggested to have anti-inflammatory effects in addition to its effects on glucose homeostasis.
Objectives. To investigate the GLP-1 level and its relationship with inflammation in patients with psoriasis and PsA.
Methods. This study included non-diabetic PsA patients and healthy controls. Disease activity was assessed in the patients by using "Composite Psoriatic Disease Activity Index (CPDAI)" which assessed five domains of disease: peripheral arthritis, dactylitis, enthesitis, axial involvement and skin findings. High-sensitive C-reactive protein (hs-CRP) levels were also investigated for the assessment of the disease activity. Fasting blood GLP-1 levels were measured in PsA patients by using ELISA method and compared with those measured in the controls.
Results. There were 97 PsA patients who fulfilled the CASPAR criteria. Fifty-seven healthy sex, age- and –body mass index (BMI) matched hospital workers were evaluated as controls (Table I). 14 patients had predominantly axial disease and 52 had predominantly peripheral disease. Twenty-seven patients (27.8%) were receiving corticosteroids. Twelve patients (12.4%) were on anti-TNF treatment, 78 (%80.4) were on methotrexate, 16 (%16.5) were on leflunomide and 12 (12.4%) were on sulfasalazine. There was no statistically significant difference in the GLP-1 levels between PsA patients and healthy controls. GLP-1 levels in patients with active disease were also not different compared with those measured in inactive patients and controls. No difference was determined in GLP-1 levels between patients with predominantly axial and predominantly peripheral disease and healthy controls. GLP-1 levels in patients with psoriasis and PsA were not correlated with the other disease activity scores including "the number of painful or swollen joints", BASDAI, DAS28, PASI and hsCRP levels. There was also no correlation between GLP-1 level and functional disease index (BASFI) and also health assessment parameters (HAQ, ASQoL). The subgroup analysis in patients who were not taking glucocorticoid treatment (n:27) revealed the similar results.
Conclusion. The results of this study suggest that there is no significant relationship between GLP-1 and inflammatory process in patients with psoriasis and PsA.
Keywords. Psoriatic arthritis, glucagon like polipeptid-1, disease activity.

Table I. Demographic, clinical and laboratory features of the patients and controls.

	Psoriatic arthritis, n=97	Healthy controls, n=57	*p* value
Median age (yrs)	48 (25-65)	43 (31-57)	0.09
Sex, M/F	32/65	24/33	0.29
Median disease duration (yrs)	4 (0-43)		
Smoking status, %	28.9	40.4	0.15
GLP-1 (pmol/L)	15.2 (3.6-58.6)	15.3 (3-56.3)	0.77
Insulin (μIU/ml)	7.4 (2-24.7)	5.7 (2.5-14.2)	0.02
HOMA-IR	1.6 (0.4-5.6)	1.3 (0.4-3.3)	0.054
ESR (mm/h)	26 (2-100)	12 (3-35)	<0.001
hs-CRP(mg/L)	4.9 (0.7-65.2)	1.5 (0.2-6.8)	<0.001

*GLP-1: glucagon like polipeptid-1; HOMA-IR: insulin resistance; ESR: erythrocyte sedimentation rate; hs-CRP: high sensitive Creative protein.

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Clinical Features and Types of Articular Involvement in Patients with Psoriatic Arthritis

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Objectives. Psoriatic arthritis (PsA) is a psoriasis-associated inflammatory arthritis which causes joint destruction. There is some epidemiologic data about PsA; however, there is not sufficient data from Turkey. Herein, we evaluated the frequency of PsA in Thrace region of Turkey according to hospital-based data. In addition, we evaluated clinical features and types of joint involvement in patients with PsA.
Method. We included 172 PsA patients fulfilling CASPAR criteria who were admitted to Trakya University Medical Faculty, Division of Rheumatology between 2003-2012. Data from the Turkish Statistical Institution was used to calculate incidence and prevalence of PsA. Patients' demographic features, durations of psoriasis and PsA, number of tender and swollen joints, treatment modalities, laboratory data and x-ray findings were recorded from hospital files.
Result. The annual incidence of PsA was 2.8/100,000. The mean annual incidence in females was 3.47/100,000 and in males, 2.15/100,000. The overall prevalence of PsA in our region was 27.9/100,000 (95%CI: 23.7-32.1) in individuals >16 years. The prevalence of PsA was higher in females than in males (34.7/100,000 vs. 21.5/100,000). Polyarthritis was present in 67 (38.9%), oligoarthritis in 47 (27.3%), spondyloarthritis in 39 (22.6%), and DIP arthritis in

19 (11.0%). The duration of psoriasis was significantly longer in polyarticular PsA patients than in DIP and oligoarticular groups (p values, respectively, 0.016 and 0.018). The number of swollen joints correlated with age (r=0.21, p=0.006), duration of psoriasis (r=0.20, p=0.01), number of tender joints (r=0.92, p=0.000), ESR (r=0.24, p=0.001) and CRP (r=0.17, p=0.026).

Our PsA had most frequently polyarticular involvement. This group had the highest frequency of erosive disease. Polyarticular group was the one with the highest age and longest duration ended up with a higher number of joint involvement, and expectedly more frequent polyarticular disease. Anti-CCP positivity was significantly higher in PsA patients with oligoarticular involvement. The predominant feature in the DIP involvement subgroup was nail changes; and in spondylitis group, it was uveitis.

Conclusion. The frequency of PsA in our region is similar to that in low-frequency regions. The most frequent type of involvement which is polyarticular is correlated with the duration of psoriasis and erosive disease.

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Keywords. Psoriatic arthritis, psoriasis, polyarthritis, oligoarthritis, spondyloarthritis.

Table I. General features of psoriatic arthritis patients.

	Psoriatic Arthritis
N (Female/Male)	172 (104/68)
Age (years)	49.3 ± 13.7
Steroid usage, n (%)	65 (37.7)
Methotrexate usage, n (%)	125 (72.7)
Leflunomide usage, n (%)	6 (3.5)
TNF blocker usage, n (%)	20 (11.6)
Tender joints count	8.3 ± 8.8
Swelling joints count	3.3 ± 4.1
Positive RF, n (%)	13 (7.5)
Positive Anti-CCP, n (%)	14 (8.1)

PASI: Psoriasis area severity index; TNF: Tumor necrosis factor; RF: Rheumatoid factor; Anti-CCP: Anti–cyclic citrullinated peptide.

Table II. The comparison of patterns of joint involvement and general features of PsA patients.

	DIP	SA	OA	PA	p
N (Female/Male)	19 (11/8)	39 (21/18)	47 (30/17)	67 (42/25)	NS
Age (yrs)	50.7±12.9	48.1±12.4	42.6±12.8	54.1±13.7	DIP is different from OA (p=0.025) PA is different from both OA and SA (p<0.001and 0.024)
Duration of Ps (yrs)	12.4±11.3	17.9±9.1	14.1±8.8	18.7±10.8	PA is different from both OA and DIP (p=0.018 and 0.016)
Smoking, n (%)	12 (63.1)	15 (38.4)	38 (80.8)	39 (58.2)	OA is different from SA and PA (p=0.01 and <0.001)
Uveitis, n (%)	1 (5.3)	5 (12.8)	1 (2.1)	2 (3.0)	SA is different from OA and PA (p=0.02 and 0.03)
Nail changes, n (%)	16 (84)	10 (30.8)	20 (42.6)	27 (40.3)	DIP is different from all groups (all p values <0.001)
Sedimentation (mm/h	23.7±14.0	32.5±24.5	35.6±28.8	52.0±37.9	PA is different from all groups (all p values <0.001)
CRP (mg/dl)	0.7±0.6	2.1±3.0	1.9±3.1	3.4±5.8	PA is different from DIP (p=0.016)
Tender joints count	7.6±7.6	3.0±2.4	3.6±3.2	15.1±9.8	PA is different from all groups (all p values <0.001), DIP is different from OA and SA (p=0.038, 0.018)

DIP: Distal inter phalangeal; SA: Spondyloarthritis; OA: Oligoarticular; PA: Polyarticular; PASI: Psoriasis area severity index; PsA: Psoriatic arthritis; PS: Psoriasis; RF: Rheumatoid factor; Anti-CCP: Anti–cyclic citrullinated peptide; CRP: C-reactive protein; TNF: Tumor necrosis factor.

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Comorbidities in Patients with Psoriatic Arthritis

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Introduction. Most studies point towards an increased cardiovascular risk and other comorbidities in psoriatic arthritis (PsA), broadly on a par with the risk level in rheumatoid arthritis, emphasizing the need for similar management in both conditions. The most relevant comorbidities are cardiovascular diseases and their risk factors. Moreover, psychological conditions and osteoporosis should also be considered.

The main purpose of this study was to describe the pattern of comorbidity in PsA patients.

Patients and Methods. A total of 29 patients were included with the diagnosis of PsA in a retrospective study, between 1997 and 2013. Clinical, biological, radiological characteristics and comorbidities were assessed for each patient.

Results. The average age was 44 years [22-61]. 42% of cases were aged between 40 and 49 years. The sex ratio was 1.23 (16 men and 13 females). The average disease duration was 13 years [6-30]. 31% of patients were smokers. 27,6% of patients received corticosteroids, 44,8% received methotrexate and 9% used salazopyrin. The most prevalent comorbidities in this population were obesity (20%), diabetes (13,8%), anemia (10%), hypertension (6,9%), dyslipidemia (6,9%), gout (3,4%), psychiatric diseases (6,9%) and myocardial infarction (3,4%). Metabolic syndrome was reported in 41%. Malignancy was observed in two cases. Comorbidities were significantly associated with disease duration, inflammation and the use of corticosteroids.

Conclusion. These results suggest that inflammatory joint disease may play a role in both cardiovascular and noncardiovascular morbidities in PsA. The therapeutic management of patients with PsA should be tailored according to clinical manifestations of the disease, including comorbidities.

Keywords. Psoriatic arthritis, comorbidities, cardiovascular risk, corticosteroids, inflammation.

P-163

Remission in Ankylosing Spondylitis. Clinical Management in Remission

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Pressing issue is long-term ankylosing spondylitis (AS) therapy with TNF inhibitors after achievement of remission in patients.

Purpose. Evaluating the effectiveness of etanercept and the possibility of reducing the frequency of administration of the drug in the long term treatment of patients with AS and their achievement of remission.

Methods. We observed 15 AS patients (male -11, female - 4, mean age 32.9 years), onset of symptoms in 9 of them was not more than 5 years, the remaining 6 - disease duration ranged from 6 to 17 years. Initially, all patients had high activity (mean values ASDAS CRP- 3, 9; BASDAI - 6, 9), and HLA-B27- positive. Etanercept was administered at a dose of 50 mg once a week, in remission we reduced frequency of administration to 50 mg once in 2 weeks. Duration of etanercept therapy ranged from 18 to 42 months. Efficacy was evaluated by ASAS criteria.

Results. After 12 weeks of treatment, all patients achieved improvement ASAS 40 criteria, partial remission matched 11 (73.3%) patients, of which 9 had symptoms for less than 5 years. Patients who reached remission increased intervals between drug administration up to 2 weeks. After 24 weeks criteria ASAS partial remission was achieved in 14 (93.3%) patients, 1 patient with AS duration more than 10 years observed improvement ASAS40. There was a decrease (p<0.05) mean values of BASDAI (1,9), BASFI (1,6), ASDAS CRP (1,1). In all reached remission patients etanercept was administered 50 mg once in 2 weeks. On the background of long-term treatment with etanercept (12, 18, 24 and 42 months), partial remission (ASAS) was preserved in 12 (80%) patients, 2 patients with AS duration more than 6 years speakers had periods of exacerbation. Partial remission criteria were observed in all 9 patients with disease duration of less than 5 years and 3 (50%) of 6 persons with symptoms lasting more than 6 years. Serious side effects were not reported.

Conclusion. AS treatment with etanercept leads to a rapid and clinically significant improvement on the basic parameters. Reducing multiplicity of administration when the clinical wellbeing to two injections per month can store remission in the majority of patients, especially in light of limitation disease.

Keywords. AS, etanercept, remission.

P-164

Subclinical Entheseal Findings are Related with Nail Involvement and High Body Mass Index in the Patients with Psoriasis without Arthritis

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Background. Imaging techniques have revealed that enthesitis may be the initial osteoarticular inflammatory site in patients with psoriatic arthritis (PsA). Visualization of the enthesis points using ultrasound or magnetic resonance imaging has revealed that subclinical enthesitis had been underestimated in patients with psoriasis without arthritis (1).
Objective. To evaluate the patients with psoriasis without any marked musculoskeletal complaint in terms of spondyloarthropathic involvement.
Methods. The patients who have not reported a history of musculoskeletal pain that adversely affected the activities of daily living within the last three years were enrolled to the study. In the patients, demographic characteristics and Psoriasis Area and Severity Index (PASI) as well as the presence of nail involvement and Nail Psoriasis Severity Index (NAPSI) scores were registered. In order to determine the tenderness of the enthesis points, the pressure up to 6 kg/cm^2 was applied to 13 different enthesis sites using a mechanical algometer. If the tenderness was detected in at least one enthesis point, enthesopathy was considered to be present. In each patient, modified Schober's test and chest expansion were measured. Statistical analysis was performed using Chi-Square test for categorical variables and t-test for normally distributed variables and Mann-Whitney U-test for skewed variables.
Results. Of 98 subjects with plaque type psoriasis, 46 (46.9%) showed enthesopathy (Table I). Mean age and mean body mass index (BMI) was higher (for both parameters, P<0.001) and mean values of modified Schober's test and chest expansion test were lower (for both parameters, p<0.01) in the enthesopathy group. Twenty-nine of 42 patients with nail lesions were detected to have enthesopathy (p<0.001). İndependently from PASI and NAPSI scores, a logistic regression model demonstrated that nail involvement (OR 3.8, 95%CI 1.5-9.8; p<0.01) and high BMI (OR 1.2, 95%CI 1.0-1.4; p<0.05) were the strongest risk factors for the development of enthesopathy (Table II).
Conclusion. In the psoriasis patients without arthritis, entheseal findings associated with nail involvement and high body mass index are commonly observed. Although radiologic lesions are not present, asymptomatic low-grade inflammation of spinal ligaments and chest wall may commonly occur. Probably within a short period of time following the onset of skin lesions, the process of enthesopathy is triggered in the majority of patients, whereas in a alter stage, a smaller part of them clearly develop inflammatory arthropathy and thereby, PsA.
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Keywords. Psoriasis, psoriatic arthritis, body mass index, modified Schober's test, chest expansion.

Table I. Demographic and clinical characteristics of psoriasis patients and comparision between subsets with enthesopathy and without enthesopathy.

	All patients (n:98)	Patients without enthesopathy (n:52)	Patients with enthesopathy (n:46)	*p*
Age (yrs)	42.8±8.6	39.7±7.8	46.3±8.1	0.000
Number of men (%)	44(44.9)	23(44.2)	21(45.6)	0.888
Body mass index	27.5±3.7	26.1±3.1	29.0±3.7	0.000
Family history (%)	40 (40.8)	22(42.3)	18(39.1)	0.749
Age of onset (yrs)	31.2±3.9	30.4±3.8	32.1±3.8	0.021
Disease duration (yrs)	11.6±7.3	9.3±6.3	14.2±7.6	0.001
PASI	6.8±4.2	6.4±4.1	7.2±4.4	0.297
Number of patients with nail involvement (%)	42(42.9)	13(25.0)	29(63.0)	0.000
NAPSI (n:42)	10.6±5.0	10.9±5.3	10.5±5.0	0.847
Modified Schober's test (cm)	5.8±0.5	5.9±0.5	5.6±0.5	0.002
Chest expansion (cm)	4.6±1.0	4.8±1.0	4.3±1.0	0.008

Table II. Multivariate logistic regression model of the predictors of entheseal involvement.

	Odds Ratio (%95CI)	*p*
Body mass index	1.19 (1.0-1.4)	0.027
Age of onset	1.05 (0.9-1.2)	0.450
Disease duration	1.05 (1.0-1.1)	0.212
Nail involvement	3.80 (1.5-9.8)	0.005

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Effectiveness and Tolerance of Anti TNFα in a Cohort of Algerian Patients with Spondyloarthritis

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Background. Treatments having as a target the TNF-α have been the first ones available which radically transformed the prognosis of patients with spondyloarthritis.
Objectives. Evaluate the safety and efficacy of anti TNF-α in patients with SA.
Methods. Prospective single center study of 102 patients with active SA refractory to conventional therapy and treated with anti TNF-α, from January 2011 to December 2013. We studied the epidemiological characteristics, clinical patterns and inflammatory markers. The general improvement was evaluated by the BASDAI, adverse effects, complications and switches were also assessed.
Results. 102 patients were diagnosed with spondyloarthritis met the ASAS2009 criteria including SA (75%) psoriatic arthritis (14%) enteropathic arthritis (11%). At our institution (60% male and 40%female) the mean age was 32years (range 11 to 57years) the mean duration from the beginning of the SA to the anti TNF-α treatment was 150 months. The Clinical patterns: axial involvement (90%) peripheral (61%) coxitis (48%) enthesitis (45%) psoriasis (14%) enteropathics (11%) uveitis (11%). Before the anti TNF-α treatment the mean BASDAI was 6.4±1.6, BASFI=5.2±2.1, ESR=52mm±35, CRP=30mg/L±25mg. 56% of our patients received Etanercept, 42% Adalilumab and 3% Infliximab. At the third month the mean BASDAI decreased by more than 50%. The treatment was maintained one year in (76%) patients and. There were no serious complications following the anti TNFα (tuberculosis 00, zoster 01, rectal carcinoma 01). We had to switch for failure in 04 patients at 3 months (01patient), 6 months (02 patients) and 12 months (01 patient), with improvement in 02 patients.
Conclusion. The effectiveness of the anti TNF-α is clearly established, they are well tolerated. The preliminary assessment tracking any risk is essential to limit their side effects.
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Keywords. Anti TNF-α, spondyloarthritis, BASDAI, safety.

P-166

Comparison of the Two Subtypes of Axial Spondyloarthritis Patients Fulfilling the Imaging Arm Based on Radiographic and MRI Findings

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Background. New Axial Spondyloarthritis Classification Criteria include an imaging arm and a clinical arm. The imaging arm includes radiographic ax-SpA patients who have radiographic sacroilitis according to modified New York criteria and non-radiographic (nr) ax-SpA patients who have sacroiliitis only by MRI. Although there is no doubt that radiographic and non-radiographic axSpA have many overlapping features, it is now one of the hot topics of discussion whether they are different entities.
Objective. To compare the demographics and clinical characteristics between the radiographic and nr-axSpA patients fulfilling the criteria of the imaging arm.
Methods. A local database has been used since December 2008 to register all patients fulfilling the imaging arm of AxSpA classification criteria. Data related to demographics, clinical features, disease activity, functional status, treatment were recorded.
Results. 720 patients who met the study criteria were identified. Radiographic sacroiliitis according to modified New York criteria was present in 533 patients. The remaining 187 patients were classified as nr-axSpA based on MRI findings. Demographics and clinical characteristics are summarized in Table I. Patients with nr-axSpA had an earlier onset of symptoms and were more often females. Prevalence of extra spinal manifestations was similar in both groups, except for anterior uveitis, which was more frequently reported by the patients with radiographic axSpA. C-reactive protein levels were significantly higher in patients with radiographic sacroiliitis as compared to those with nr-AxSpA. HLA-B27 prevalence was numerically greater among patients with radiographic axSpA,

but was not statistically significant. Disease activity measured by BASDAI, but not by ASDAS, was higher in the nr-axSpA group; BASFI scores were similar in both groups. BASMI score was higher in radiographic ax-SpA patients. While anti-TNF therapy was used more frequently by patients with radiographic sacroiliitis, DMARD use was similar in both groups.

Conclusion. Although many demographic and clinical features are similar between the ax-SpA patients with and without radiographic sacroiliitis classified with the imaging arm, differences such as higher prevalence of females and numerically lower prevalence of HLA-B27 among patients with nr-axSpA are of interest.

Keywords. Axial Spondyloarthritis, non-radiographic, radiographic.

Table I. Demographics and clinical characteristics of the radiographic and non-radiographic axSpA patients.

Demographic and clinical features	Radiographic sacroiliitis (n:533)	Non-radiographic sacroiliitis (n:187)	*p*
Age, mean ± SD	43 ± 12.0	42 ± 13.2	0.232
Male sex n,%	395, 74.1	72, 38.5	<0.001
Age at beginning of the symptoms, mean ± SD	25 ± 9.1	28 ± 10.3	0.010
Diagnostic delay, mean ± SD	8 ± 8.5	7 ± 8.0	0.023
Arthritis n,(%)	195, (36.6)	42, (22.5)	0.491
Hip replacement n,(%)	23, (4.3)	0	0.023
Anterior uveitis n,%	97, (18.2)	10, (5.3)	0.007
Psoriasis n,%	16, (3.0)	4, (2.1)	0.399
IBD n,%	16, (3.0)	2, (1.0)	0.082
HLA B27 positivity n1/n2 (%)	166/243 (68.3)	46.3 % (36/78)	0.146
CRP mg/dl, mean ± SD	19.0 ± 25.6	9.5 ±17.1	<0.001
BASDAI, mean ± SD	3.5 ± 2.2	4.3 ± 2.5	<0.001
ASDAS-CRP, mean ± SD	2.9 ±1.1	2.1 ±1.1	0.223
BASFI, mean ± SD	2.9 ±2.6	2.7 ±2.5	0.346
BASMI, mean ± SD	3.9 ±1.9	2.3 ±1.0	<0.001
SSZ, n, (%)	132, (24.2)	21, (11.2)	0.316
MTX, n, (%)	34, (6.3)	4, (2.1)	0.317
Anti TNF, n, (%)	103, (19.3)	8, (4.2)	<0.001

P-167

The Clinical, Laboratory Aspects, Correlations of Disease Activity Score and Treatment Choices of Ankylosing Spondylitis Patients

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Background. Ankylosing spondylitis is a chronic inflammatory rheumatic disease of unknown etiology. Disease activity and function are often assessed using the Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) and the Bath Ankylosing Spondylitis Function Index (BASFI). ASDAS has been developed as s disease activity measuring tool for ankylosing spondylitis.

Objectives. To evaluate demographic data, clinical aspects, correlation of disease activity score and treatment choices of patients with Ankylosing spondylitis (AS) in Turkish population from central Anatolian.

Methods. Consecutive 623 patients according to ASAS criteria and the modified New York criteria for the classification of AS followed up at Ankara University, Ankara Faculty of Medicine, Department of Internal Medicine, Division of Rheumatology between February 2009 and February 2013 were included in the study. The demographic aspects, disease activity parameters and treatment choices of the patients were evaluated. Bath AS disease activity index (BASDAI), Bath AS functional index (BASFI), Bath AS metrology Index (BASMI), erythrocyte sedimentation rate (ESR), c-reactive protein (CRP) were measured.

Results. Of the 623 patients, 398 (63.9%) were male, 225 (36.1%) were female. The mean age of the patients was 36.9±11.7 years in male, 40.4±11.7 years in female patients. We found that HLA-B27 positivity in 459(73.7%) patients. The frequency of axial, peripheral involvement, and non-radiographic spondyloarthropathy (SpA) were 69.1%, 17.9%, and 13% respectively. Disease activity parameters were as follows; BASMI score 2.36±2.29, BASDAI score 6.17±1.50, BASFI score 3.0±1.51, ASDAS-crp 3.19±3.20, ESR 21.3±19.0 mm/h, CRP 11.2±26.0 mg/dl. The statistically significant correlation was observed between BASDAI, BASFI, and ASDAS-CRP by spearman's rho correlation test ($p<0.05$). The specificity and sensitivity of ASDAS-CRP for evaluating disease activity was 0.3654 (95% CI 0.2480-0.5013) and 0.9546 (95% CI 0.9359-0.9680) (LR + 1.50 and LR – 0.12). The duration of anti-TNF therapy was 28.1±19.3 months. Of the patients, 293 (47%) had been using biological agents. The choices of anti-TNF therapy were as follows 91 infliximab, 92 etanercept, 101 adalimumab, and 9 golimumab.

Conclusions. In the light of these findings, age, sex, HLA-B27 positivity, and disease activity parameters of the patients in central Anatolian rheumatology department were similar other trials in Turkey. There were no difference between ASDAS crp scores and BASDAI.ASDAS crp was not superior to BASDAİ.

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Keywords. Ankylosing spondylitis, Disease activity index, BASDAI, ASDAS crp.

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The Role of Anti-Cd74 Antıbody in The Development of Spondyloarthropathy in Ankylosıng Spondylıtıs and Inflammatory Bowel Dısease and Dısease Actıvıty

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Background. The etiopathogenesis of Ankylosing Spondylitis (AS) is still uncertain. A strong association between AS and HLA-B27 and the other genes was determined. Inflammatory Bowel Disease (IBD) is a chronic inflammatory disease with unclear etiopathogenesis. Extraintestinal manifestations is frequent in IBD. The most frequent extraintestinal manifestations is musculoskeletal manifestations.

Objective. We aimed to examine the role of anti-CD74 antibody (a part of MHC (Major histocompatibility complex) class II) levels in the development of spondyloarthropathy and the disease activity in AS and IBD, and the difference from the levels of controls in Turkish population.

Materials and Methods. This study was carried out on the patients applying to the rheumatology and gastroenterology polyclinics in Ankara University Faculty of Medicine. We analyzed 111 AS, 108 IBD and 101 healthy controls. Sera of patients and healthy controls were analyzed for antibodies against anti-CD74 by ELISA. Demographic and clinic properties of patients were analyzed. The relationship between anti-CD74 antibody levels and disease activity was investigated.

Results. AS patients were more often male compared with IBD patients and controls ($p<0,005$). HLA-B27 status was studied, HLA-B27 positivity was 86,5% in AS patients, 21,3% in IBD patients. The mean levels of anti-CD74 antibodies were 6,99 ng/ml (SD±3,24) in AS, 6,25 ng/ml (SD±3,34) in IBD, 7,83 ng/ml (SD±4,72) in healthy controls. Anti-CD74 levels were higher in healthy controls compared with IBD patients ($p=0,07$). There were no statistically significance difference between AS-IBD and AS-control groups. There was no statistically significant correlation between anti-CD74 levels and HLA-B27 status and disease activity.

Conclusion. The correlation between antibodies against CD74 and the development of s spondyloarthropathy in AS and IBD and disease activity in Turkish population could not be shown. To validate the usefulness of anti-CD74 levels in the development of spondyloarthropathy and disease activity much larger scale studies will be needed.

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Keywords. Ankylosing Spondylitis, Inflammatory bowel dısease, Anti-cd74 antıbody.

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The Frequency of Spondyloarthropathy in Inflammatory Bowel Diseases

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Background. The most extra intestinal finding of inflammatory bowel diseases is musculoskeletal involvement. "Enteropathic arthritis" has been described as an inflammatory arthritis that gastrointestinal system plays a role in its pathogenesis and occurring with inflammatory bowel disease. Arthritis associated with inflammatory bowel disease affects peripheral and axial joints.
Objective. The aim of this study is to evaluate the frequency of spondyloarthropathy and ankylosing spondylitis in inflammatory bowel diseases.
Methods. 319 patients with inflammatory bowel disease following-up at Ankara University medical faculty gastroenterology department were included in the study. Modified New York criteria and ASAS classification criteria were used for ankylosing spondylitis. European spondyloarthropathy study group (ESSG) criteria were used for enteropathic arthritis group. Descriptive statistical data for continuous variables were presented as median (min max), % and frequencies were used for categorical variables to summarize of the results of the study.
Results. The mean age of the patients was as follows; 40.08±12.7 years in Crohn's disease (CD), 40.0.8±12.4 years in ulcerative colitis (UK). Of the CD patients, 88 (46.3%) was male, 102 (53.7%) was female. 68 (52.7%) was male, and 61 (47.3%) female was found in UK patients. HLA-B27 positivity was measured 36 (18.9%) in CD, and 27 (20.9) % in UK. The frequency of enthesopathy was observed 32(24.8%) in UK and 57(30%) in CD. Anterior uveitis was found 5 (2.6%) in CD and 4 (3.1%) in UK. Of the patients, 55 (28.9%) CD patients and 29 (22.5%) UK patients had active smoking history. Positive family history was described 39 (20.5%) in CD and 23 (17.8%) in UK patients. AS was found 26 (13.7%) in CD and 10(7.8%) in UK. In overall inflammatory bowel disease patients, the frequency of peripheral arthritis was 49(15.4 %), AS was 36(11.3) %, and SpA was 61(19.1%).
Conclusion. The bowel can be affected different manifestations in IBD. In particular, musculoskeletal involvement may be the first findings of the disease. The frequency of AS was found as 11.3% and SpA was found 19.1% according to our single center experience.

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Keywords. Frequency, Inflammatory bowel disease, Spondyloarthropathy.

Table. Musculoskeletal involvement in IBD patients.

	CD (n=190)/(n%)	UK (n=129)/(n%)	IBH (n=319)/(n%)
Ankylosing spondylitis (n/%)	26 / 13.7	10 / 7.8	36 / 11.3
Spondyloarthropathy (n/%)	44 / 23.2	17 / 13.2	61 / 19.1
Peripheral arthritis (n/%)	31 / 16.3	18 / 14.0	49 / 15.4

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How to Improve Early Diagnosis of Axial Spondyloarthritis (According to Rheumatologic City Center, Kazan, Russia)

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Background. Diagnosis of axial spondyloarthritis (SpA) today has a lot of complexity, so the diagnosis of ankylosing spondylitis (AS) is exhibited an average of 7-8years from the first symptoms of the disease, which leads to later onset of potentially effective therapy.
Objectives. To assess the significance of educational activities for primary contact physicians in the early diagnosis of AS.
Methods. In Kazan from 2010 to 2013 a cycle of «rheumatologist schools» for physicians of primary contact was held with discussions about inflammatory back pain criteria, variants of the onset and algorithm of the early diagnosis of AS. To assess the effectiveness of schools, medical records of patients directed to a rheumatologist with AS diagnosis were analysed. The study included patients with newly SpA in a given year: 36 people in 2009 (base year), 42 – in 2010, 54 - in 2011, 58 patients in 2012, 64 cases in 2013. All participants underwent clinical examination with determination of HLA B27, radiographs of the pelvis, if necessary - MRI of sakroiliac joints (1,5 Tl, T2 mode with fat sat).
Results. The result was improving of AS detection in Kazan population: from 2009 to 2013 significantly ($p<0,05$) decreased the time from onset of symptoms to the time of diagnosis: 8,4 ± 2,5 years in 2009, the base year, to 4,2 ± 1,3 years in 2010, 3,5 ± 1,7 years in 2011, 2,9±1,9 years in 2012, 2,8±1,7 years in 2013. Proportion of women among patients with AS was 16.7% in 2009 to 26.2% in 2010, 29.6% in 2011 and 29.3% in 2012, 31.2% in 2013.
In 2009 non-radiological stage of SpA was not found in any patient. In 2010, according to MRI of sakroiliac joints (the presence of osteitis), non-radiological stage was exhibited in 16.7% of patients, in 2011-20.3%, in 2012-27.5% and in 2013-29.7% of patients.
Conclusions. Experience in conducting educational activities in Kazan led to improving of early AS diagnosis.
Keywords. Early, AS, educational activities.

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Impact of Physiotherapy as Non-Pharmacological Treatment in Ankylosing Spondylitis in The Institute "Dr Simo Milosevic" Igalo, Montenegro

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Background. In recent years, advances have been made in the treatment of ankylosing spondylitis (AS) and related diseases. There is a lot that can be done to relieve the pain and stiffness of the AS and recent studies show that the new biologic medications (TNF-α Inhibitors) can potentially slow or halt the disease progression in some people.
Objective. The objective was to investigate the effect of physiotherapy as non-pharmacological therapy in patients with AS depending on whether its pharmacological treatment involves biological agents or not.
Methods. Total of 68 patients who fulfilled ACR criteria for AS were on 4 week rehabilitation and physical treatment in Institute „Dr Simo Milosevic" Igalo. Depending on their pharmacological treatment they were grouped into two groups: (I) those who were treated with biological therapy (BT group, n=32) and (II) with no biological therapy (non-BT group, n=36). Applied physical therapy have entailed a combination of active (mobilizing and strengthening exercise in gym and swimming pool, breathing exercises and brisk walking) and passive (peloid application, bubble bath, massage-manual and underwater and electrotherapy) procedures. The participants were evaluated clinically before and after rehabilitation period (week 0 and 4).The treatment response were measured by using BASFI and BASDAI. Analyzed groups did not differ by HLA-B27 positivity, duration of diseases and by initial mean values of BASFI and BASDAI.
Results. In the BT group were significantly younger ($p<0.001$) male sex ($p<0.04$) patients in compare to non-BT group. But patients of non-BT group have significantly more often comorbidities ($p<0.05$) and more frequent use of NSAID ($p<0.006$). Analyzed groups did not differ according to mean values of applied physical therapy (active, passive or both). However patients of BT group have significantly frequent active therapy ($p<0.001$) while those from non-BT group have significantly frequent passive therapy ($p<0.001$). After 4 week of physical treatment there were significant improvement in the analyzed groups by average values of BASFI (BT $p<0.05$; non-BT $p<0.001$) and BASDAI (BT $p<0.01$; non-BT $p<0.001$). Obtained difference between those two groups were not significant for BASFI and BASDAI.
Conclusion. Physical therapy are characterized by wide range of modalities and possibility of combining active and passive treatments. Combined 4 week physical therapy in Institute "Dr Simo Milosevic" Igalo for AS patients leads to significant improvements of BASFI and BASDAI regardless on the applied pharmacological treatments.
Keywords. Ankylosing spondylitis, physical therapy, BASFI and BASDAI.

P-172

Relationship Between Disease Activity and Exercise in Ankylosing Spondylitis (AS)

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Objective. To investigate the relationship between disease activity and the efficacy of exercises in AC.
Methods. Twenty-five AS patients (pts) were included (16 male, 9 female). Mean age - 38,9±17,2 yrs, mean duration of AS - 10,9±7.9 yrs. Among improved patients, 76,0% have a predominantly axial manifestations of the disease. Peripheral arthritis had 24,0% of pts. High disease activity - 14 (56,0%) from 25 pts (BASDAI 6,1±1,5). All pts received adequate doses of NSAIDs before and during study. Pts had not received other types of rehabilitation and physiotherapy treatment. Pts trained in groups of 5 people, specially developed set, consisting of 15 exercises directed to the increase of excursions chest and flexibility of the spine, performed on the couch. Frequency of repetition exercises 4 to 8 times. Exercise therapy were held every day (except weekends), at the same time. Lesson duration - 30 minutes in total there were 10 lessons. Pts were evaluated before the start and at the end of the study. Evaluation parameters were: BASDAI (NRS), daily and night spinal pain (NRS), the patient's global evaluation (NRS), assessment of the difficulties of doing exercises patient (NRS, where "0" - do not experience difficulties, "10" - can't do the exercises). Laboratory assessments included: erythrocyte sedimentation rate (ESR).
Results. Data showed an improvement in all the outcome measures at the end of the study: disease activity (BASDAI 4,5±2,2 vs 2,6±1,6, p<0.001); daily (3,8±2,5 vs 2,1±1,7, p<0,05) and night (3,8±2,9 vs 1,7±1,2, p<0,004) spinal pain; patient's global evaluation (4,8±1,9 vs 2,7±1,6, p<0,0002). Exercise therapy do not adversely affect the level of ESR (22,2±21,1 vs 16,2±14,5, p=0.02). Assessment of the difficulties of doing exercise therapy of pts with high disease activity (BASDAI >4), was significantly higher compared with pts with low activity (6,6±1,3 vs 5,0±1,5, p<0,004). In the end of the study 19 (76%) pts had low activity (BASDAI<4). With the decrease of disease activity score difficulties of doing exercise therapy significantly reduced (p<0,00001). Was found a direct correlation between the evaluation of a pts difficulties of doing exercise therapy and BASDAI (r=0.7) and daily and night spinal pain (r=0.65), the patient's global evaluation (r=0,7).
Conclusions. Exercise therapy do not have a negative impact on the patients with high disease activity. However, the higher activity reduced opportunities to do exercises properly.
Keywords, Exercise, ankylosing spondylitis, disease activity.

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Exercise Therapy and Functional State Patients with Ankylosing Spondylitis (AS)

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Objective. To study the effect of exercise therapy on the functional state patients (pts) with AS.
Methods. Twenty-five AS patients (pts) were included (16 male, 9 female). Mean age - 38,9±17,2 yrs, mean duration of AS - 10,9±7.9 yrs. Among improved patients, 76,0%have a predominantly axial manifestations of the disease. Mean value of BASFI - 3,8±2,4, 11 pts (44,0%) had BASFI>4 (6,2±1.4). Mean value of BASMI (on a 10 point scale) - 3,8±1.5. All pts received adequate doses of NSAIDs before and during study. Pts had not received other types of rehabilitation and physiotherapy treatment. Pts trained in groups of 5 people, specially developed set, consisting of 15 exercises directed to the increase of excursions chest and flexibility of the spine, performed on the couch. Frequency of repetition exercises 4 to 8 times. Exercise therapy were held every day (except weekends), at the same time. Lesson duration - 30 minutes in total there were 10 lessons. Evaluation parameters were: BASFI (NRS) and BASMI (tragus to wall distance, modified Schober test, cervical rotation, lumbar side flexion, and intermalleolar distance). During the study all mobility measures of the BASMI index was performed for 10 minutes before and after exercise therapy.
Results. Data showed an improvement in all the outcome measures at the end of the study: (BASFI 3,8±2,4 vs 2,3±1,8 (p<0,009); BASMI 3,8±1,5 vs 2,8±1,3 (p<0,005)). Significantly increased movements were noted at measuring excursions chest (3,8±2,1 vs 5,3±1,9,p<0,03) and modified Schober test (2,4±1,4 vs 3,7±1,7, p<0.02)). Other spinal movement was not significant increase although in general had positive dynamics. Analysis of the dynamics of increasing the spinal movements showed the following patterns: the most active spinal movement increased for the first 3-5 days, in the following 3 days the spinal movement did not increase, then daily until the end of the study there has been a progressive increase all mobility measures of the BASMI index.
Conclusions. Our study confirms the need daily exercise therapy in AS. Dynamics of increase of spinal movements connected with the specificity of adaptation of the muscle tissue to physical stress.
Keywords. Exercise, ankylosing spondylitis, function.

P-174

Evaluation of the Effectiveness of Home Based or Hospital Based Calisthenic Exercises in Patients with Ankylosing Spondylitis

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Background Contex. Ankylosing spondylitis (AS) is a chronic systemic inflammatory disease that affects mainly the axial skeleton and causes significant pain and disability. Inflammatory back pain is characterized by improvement of symptoms with exercise and no improvement or worsening with rest. The treatment guidelines therefore recommend exercise as an important part of the disease management.
Purpose. The aim of this study is to evaluate the effects of calisthenic exercises on functionality, mobility, disease activity, quality of life, and psychological status in patients with Ankylosing spondylitis (AS).
Study design. Prospective analysis of forty patients diagnosed with AS were randomized into two exercise groups.
Methods. Forty patients diagnosed with AS were randomized into two exercise groups (hospital-based or home-based). Outcome measures including the Bath AS Functional Index (BASFI), Bath AS Disease Activity Index (BASDAI), Bath AS Metrology Index (BASMI), AS Quality of Life Questionnaire (ASQoL), Bath AS Patient Global Score (BAS-G) Hospital Anxiety Depression Score (HADS), erythrocyte sedimentation rate (ESR) and the serum C-reactive protein (CRP) levels were assessed at the baseline and at 8 weeks.
Results. Thirty-seven participants completed the exercise programme (hospital based=18, home based=19). The mean age was 34.67±7.90 years. The mean duration of disease was 7.16±2.49 years. After the 8-week exercise programme, the home-based exercise group showed significant improvement in ESR levels and hospital-based exercise group showed significant improvements in terms of the BASMI and HADS-A scores.
Conclusion. Calisthenic exercises can be easily performed both at home and in hospital setting. In patients with AS, calisthenic exercises performed at the hospital may improve the mobility, and psychological status (anxiety).
Keywords. Ankylosing spondylitis, calisthenic exercise, mobility, anxiety.

Table. Pre and post exercise inter- group comparisons of the AS groups (mean ± SD).

	Home based (n=19)	Home based (n=19)	Home based (n=19)	Hospital based (n=18)	Hospital based (n=18)	Hospital based (n=18)
	Preexercise	Postexercise	*p*	Preexercise	Postexercise	*p*
ESR	21.52±12.98	17.47±8.59	0.043	30.38±21.74	26.38±16.42	>0.05
CRP	0.44±0.54	0.32±0.30	>0.05	1.25±2.80	0.90±1.69	>0.05
BASDAI	5.02±2.43	4.66±2.02	>0.05	4.15±1.79	3.66±1.84	>0.05
BASFI	3.64±2.87	3.78±2.67	>0.05	3.16±2.43	2.63±2.07	>0.05
BASMI	2.42±1.50	2.52±1.34	>0.05	2.38±1.19	1.83±1.04	0.008
BASG	5.10±2.11	4.80±1.67	>0.05	4.58±1.88	4.45±2.14	>0.05
ASQOL	9.63±5.41	9.00±5.06	>0.05	7.11±4.33	6.22±4.59	>0.05
HADS-A	8.84±4.08	8.63±4.23	>0.05	8.22±4.90	6.50±3.45	0.045
HADS-D	9.21±4.57	9.47±5.61	>0.05	7.66±4.25	6.38±3.58	>0.05
Chest expansion	4.89±1.24	5.00±1.00	>0.05	4.22±1.89	4.72±1.99	>0.05

AS: Ankylosing spondylitis; ESR: erythrocyte sedimentation rate; CRP: C-reactive protein; BASFI: Bath Ankylosing Spondylitis Functional Index; BASDAI: Bath Ankylosing Spondylitis Disease Activity Index; BASMI: Bath Ankylosing Spondylitis Metrology Index; HADS: A hospital anxiety and depression scale-anxiety; HADS: D hospital anxiety and depression scale-depression; ASQoL: ankylosing spondylitis quality of life; BASG: Bath Ankylosing Spondylitis Patient Global Score.

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The Evaluation of Psychologic Effects of Calisthenic Exercises on Neuroinflammatory and Rheumatologic Diseases

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Purpose. The aim of this study is to evaluate the effects of calisthenic exercises on psychological status in patients with Anklosing spondylitis (AS) and multiple sclerosis.
Study Design. Prospective analysis of eighty patients diagnosed with AS were randomized into two exercise groups.
Methods. Forty patients diagnosed with AS were randomized into two exercise groups (group 1= hospital-based, group 2= home-based). Outcome measures including the Bath AS Functional Index (BASFI). Bath AS Disease Activity Index (BASDAI), Bath AS Metrology Index (BASMI), AS Quality of Life Questionnaire (ASQoL), Bath AS Patient Global Score (BAS-G) and the Hospital Anxiety Depression Score (HADS) were assessed at the baseline and at 8 weeks. Forty patients diagnosed with MS were randomized into two exercise groups (group 1 = hospital-based, group 2 = home-based). Outcome measures including the MS International Quality of Life Scale, 10-meter walking test, Berg Balance Scale, Fatigue Severity Scale and the Hospital Anxiety Depression Inventory were assessed at the baseline and at 8-weeks.
Results. Seventy-three participants completed the exercise programme (hospital based=34, home based=39). The mean age was 33.75±5.77 years. After the 8-week exercise program on patients of MS being a neuroinflammatory process, the significant intra-group changes have been observed in anxiety scales of house group patients, and in both of anxiety and depression scales of hospital group. Despite that, significant intra-group changes have been observed in anxiety scale of hospital group of patients of AS which is a rheumatic process. Evaluating the depression and anxiety changes in house- and hospital-based exercise programs on MS patient group, significant change has been observed in hospital group. No inter-group change difference has occurred among AS patient group.
Conclusion. In house- and hospital based exercise programs during neuroinflammatory processes, positive improvements have been observed on depression and anxiety. This change is more salient in hospital-based exercise program. But in rheumatologic processes, positive changes have been observed only in hospital-based exercise program. The positive effects of exercises on neurologic and rheumatologic chronic inflammatory processes coursing with disability should not be underestimated. Further studies with comparison groups and larger samples are needed to explore the promising results of this study before any cause and effect relationship can be determined.
Keywords. Calisthenic exercise, multiple sclerosis, Ankylosing spondylitis.

P-176

Ankylosing Spondylitis Gender Difference

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Background. We want to evaluate Ankylosing Spondylitis (AS) patients according to their genders (male/female) in differences like physical examination findings, functional capacity, disease duration and activity.
Method. 74 female (35.9±10.7 year SD) and 139 male (35.2±10.4 year SD) AS patients were involved into the study. Patients with inflammatory bowel disease and psoriasis were excluded. Smoking habits, alcohol consumptions, disease duration, HLA B27 positivity, uveitis history, past medication history, anti TNF use, spinal measurements including Modified Schober's test, tragus-wall distance, lateral lumber flexion and disease activity scores including BASDAI, BASFI, MDHAQ, patient's global assessment (VAS: 0-10), physician's global assessment (VAS:0-10) were collected.
Results. Disease duration, disease activity and functional capacity were similar between two genders (p=0.203). Male patients were smoking more than female ones (p=0.004). Axial involvement were more frequent and severe in males than females (p=0.001). There was not any difference in anti TNF use between the two groups. But, female patients' needs for steroids and DMARDs were more prominent than males.
Conclusion. Although, AS is a male dominant disease as in our study, disease activity and physical functional scores were similar between the two genders. On the other hand, axial involvement has been seen more common in male patients.
Keywords. Ankylosing Spondylitis, Gender, difference.

Table. Ankylosing Spondylitis patient's characteristics and distribution of these characteristics according to their genders.

	Male (n=139)	Female (n=74)	p value
Age (year, SD)	35,2 ± 10,4	35,9 ±10,7	0,656
Disease duration (year, SD)	7,8 ± 8,2	6,5 ± 6,4	0,203
Smoking (n)	75	25	0,004
Alcohol (n)	11	2	0,127
Uveitis, (% of patients)	26	14	0,897
HLA-B27 positivity, (% of 138 patients)	70/94	28/44	0,191
Indometacin therapy, (% of patients)	96	53	0,814
NSAID therapy, (% of patients)	89	44	0,512
Salazopyrin therapy, (% of patients)	87	58	0,019
Methotrexate therapy, (% of patients)	17	22	0,002
Steroid therapy, (% of patients)	16	19	0,008
Anti TNF therapy, (% of patients)	43	26	0,533
Modified-Schober (cm)	3,7 ± 2,2	4,4 ± 1,8	0,035
Lateral Flexsion-Right(cm)	9,7 ± 6,4	11,7 ± 4,8	0,003
Lateral Flexsion-Left(cm)	9,5 ± 6,4	11,9 ± 5,3	0,002
Tragus-wall distance (cm)	20,2 ± 7,4	15,7 ± 4,7	0,000
Chest expansion (cm)	3,8 ± 2,1	3,7 ± 1,7	0,861
BASDAI	4,6 ± 2,3	5 ± 2,5	0,299
BASFI	4 ± 2,5	3,7 ± 2,8	0,394
MDHAQ-pain	5,3 ± 3	5,4 ± 3	0,709
MDHAQ-function	2,5 ± 2,3	2,3 ± 1,9	0,561
MDHAQ-RAPID-3	13 ± 6,6	13 ± 7	0,898
Fatigue	3,3 ± 2,6	3,8 ± 3	0,270
Patient global evaluated	5,2 ± 2,7	3,8 ± 3	0,941
Medicine global evaluated	4,6 ± 2,4	4,2 ± 2,2	0,201
Beck depression index	17 ± 11	18,2 ± 11,7	0,546

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Vertebral Surgery Option in Ankylosing Spondylitis Patient with Thoracolumbar Kyphotic Deformity: Case Presentation

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Bone Loss in Patients with Ankylosing Spondylitis

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Objective. To examine bone mineral density (BMD) at the femoral neck and lumbar spine and to look for the association between bone loss and disease activity in patients with ankylosing spondylitis (AS).
Methods. We studied 220 (168 men and 52 women) consecutively hospitalized AS pts.; mean age 35,1±9,5 years, mean age of disease onset 30,1±9,7. HLA-B27 was detected in 82% pts. Mean BASDAI was 4,6±2,1, ASDAS-CRP - 3,3±1,2. Clinical data were collected and BMD was measured using dual energy x-ray absorptiometry (DXA) of the femoral neck and lumbar spine. High disease activity was assumed in cases BASDAI >4, ASDAS-CRP >2,1.
Results. The reduction in BMD was found in 119 (54%) pts. 34 pts (15%) had bone loss of the lumbar spine, 34 pts (14%) had bone loss of the femoral neck, reduction in BMD in both areas was found in 55 pts (25%). In all pts with reduction in BMD mean Z-score was -1,7±0,6 at the femoral neck and -2,1±0,7 for the lumbar spine. Bone loss in femoral neck and/or lumbar spine was associated with disease activity according to BASDAI and ASDAS – CRP scores (p=0,03). No association was found between bone loss and CRP or ECR levels (p=0,18, p=0,21).
Conclusion. The reduction in BMD was found in 54%. Bone loss in lumbar spine and femoral neck was associated with disease activity according to BASDAI and ASDAS-CRP scores.
Keywords. Ankylosing spondylitis, bone loss, BASDAI.

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Bilateral Sacroiliitis Secondary to Isotretinoin Therapy: A Case Report

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Temperament and Character Profiles of Ankylosing Spondylitis Patients Compared to Major Depression Patients and Healthy Controls

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Background. Personality may affect the patient's perception of disease, pain and coping with the effects of disease, so determination of personality characteristics may be important in the assessment and management of ankylosing spondylitis (AS).
Objective. To evaluate temperament and character profiles of AS patients and compare them with that of major depression (MD) patients and healthy controls (HC).
Method. 85 AS patients, 70 MD patients and 55 HC's were involved in the study. Temperament and character was evaluated with self-rated Cloninger's Temperament and Character Inventory (TCI). Depression and anxiety levels were evaluated with clinician rated Hamilton Depression and Anxiety Scales. Disease severity was evaluated with Bath Ankylosing Spondylitis Radiology Index (BASRI), Metrology Index (BASMI), functional index (BASFI), erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) in AS patients.
Results. Mean disease duration was 139.46 months, mean CRP level was 15.56 mg/L and mean ESR level was 22.68 mm/hr. Mean BASFI was 2.36, BASMI was 6.26, BASRI-spine score was 6.01 and BASRI-total score was 7.30. Depression and anxiety scores were highest in MD patients, lowest in HC's and in between these two groups in AS patients. As for TCI profiles; novelty seeking was lower in AS patients than MD patients but it was not different from HC's. Harm avoidance was similar in MD and AS patients and higher than HC's in both groups. Reward dependency was lower in AS patients compared to both MD patients and HC's. Self-directedness in AS patients was higher than MD patients but lower than HC's. Persistence, cooperativeness and self-transcendence was similar in all groups (Table I). Harm avoidance was positively correlated with ESR (r=0.332, p=0.006) and CRP (r=0.246, p=0.043) while other TCI profiles did not correlate with any other disease severity index or disease duration. ESR was also positively correlated with HAMD (r=0.400, p=0.028).

Table I. Comparison of sociodemographic and clinical variables and TCI profiles.

Variable	AS (Group1) (N=85)	MD (Group2) (N=70)	HC (Group 3) (N=50)	*p*	Posthoc difference
Sex N(%)					
Female	20 (23,5)	56 (80,0)	41 (74,5)	0,000	% of males
Male	65 (76,5)	14 (20,0)	14 (25,5)		1>2, 1>3
Age	40,12 ±11,46	32,63 ±9,86	31,07 ± 8,47	0,000	1>2, 1>3
NS	16,71 ± 4,58	18,84 ± 5,19	16,96 ± 4,41	0,034	1<2
HA	19,01 ±5,70	21,02 ±7,24	15,87 ± 5,77	0,000	1>3, 2>3
RD	13,25 ± 3,07	14,75 ± 3,21	15,11 ± 2,74	0,002	1<2, 1<3
P a	6 (1-8) a	5 (1-8) a	5 (0-8) a	0,914	1=2=3
S	26,94 ± 7,08	23,91 ± 6,95	30,85 ± 5,66	0,000	1>2, 1<3, 2<3
C	29,42 ± 5,42	29,55 ± 5,50	31,22 ± 4,37	0,120	1=2=3
ST	19,75 ± 5,37	19,02 ± 5,47	17,56 ± 4,83	0,075	1=2=3
HAMD	3 (0-22) a	24 (14-38) a	0 (0-4) a	0,000	1<2,2>3,1>3
HAMA	6 (1-31) a	20 (11-49) a	0 (0-5) a	0,000	1<2,2>3, 1>3

a Non-parametric test distributions are given as median (min-max), and parametric test distributions are given as mean ± SD. Categoric distributions are given as number (%). NS: Novelty seeking; HA: Harm Avoidance; RD: reward dependence; P: persistence; S: Self-directedness; C: cooperativeness; ST: self-transcendence; HAMD: Hamilton depression scale; HAMA: Hamilton anxiety scale.

Conclusion. Temperament properties like novelty seeking, harm avoidance and reward dependency are inborn tendencies to respond automatically to emotional stimuli and they play an important role in the individual's response to stress and effect their coping mechanisms, while character is mainly learned through environment. Lower novelty seeking and higher harm avoidance is usually associated with depression and anxiety and lower reward dependency is usually associated with lower threshold for pain. Self-directedness is the main component of personality maturation and lower scores on this dimension may reflect the effects of disease on personality and may be associated with a vulnerability to mood and pain disorders. Accordingly, AS patients with such a TCI profile was found to have higher depression and anxiety levels compared to HC's and their TCI profiles were very similar to MD patients. Thus, evaluation of TCI profiles of AS patients may be important in determining the effects of disease on their mood.
Keywords. Ankylosing spondylitis, Temperament, Character, Depression, Anxiety, Disease severity.

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Level of Awareness of Inflammatory Back Pain and Axial Spondyloarthritis Among Medical Specialties who Frequently See Patients with Low Back Pain

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Background. Recognition of inflammatory back pain (IBP) is central to early diagnosis of ankylosing spondylitis (AS), as well as to that of axial spondyloarthritis (AxSpA)While AxSpA is a hot topic for practicing rheumatologists, it is not yet known to what extent the recent knowledge accumulated in this field has been communicated to the other specialties.
Objectives. To assess the level of awareness of features of IBP and AxSpA among physicians, who are frequently consulted first by patients with low back pain
Methods. Trained interviewers using a structured questionnaire performed face to face interviews with a total of 403 physicians, from six different regions of Turkey, which included orthopedists (n:202), family physicians (n:102), and neurosurgeons (n:99). In the first part of the interview, physicians were asked to tell the topics they question when interviewing patients with back pain. Then they were shown 10 questions relevant for inflammatory back pain, and asked to rank them, from 1 to 10, with 1 having the highest importance. In the second part of the interview they were asked, which laboratory tests and imaging modalities they order, when assessing patients with back pain. They were also asked if they would order any of the tests displayed to them when they think the patient has inflammatory back pain. In the next part of the interview the physicians' familiarity with the concept of AxSpA and their referral patterns and management strategies in this group of patients were evaluated.
Results. The duration of back pain was the most frequent topic questioned by the physicians (68%). Other domains, such as the effect of activity and night/morning pain, which are relevant for diagnosing IBP were asked by only a small proportion of physicians, (15% and 14%, respectively). Duration of back pain was ranked as having the highest importance (mean rank: 2.5) and the history of NSAID use with the least importance (6.9). The majority of physicians stated that they don't request blood tests (64%) when evaluating patients with low back pain and they refer 24% of their patients. Suspicion of a rheumatologic disease is the reason for referral in 15% of those cases. The great majority of physicians (89%) expressed that they can make distinction between mechanical and inflammatory pain. When asked what tests they would order if the patient has IBP; the answers given were CRP (85%), ESR (72%), pelvic X ray (<1%), MRI (9%) and HLA-B27(10%). However when it is asked in multichoice format, then the corresponding figures changed dramatically: 97%, 92%, 80%, 75% and 32%, respectively. About half of the interviewed physicians admitted that they were not aware of the concept AxSpA.
Conclusion. There is a great need, at least in Turkey, to increase awareness of the concept of AxSpA and its main clinical features among specialists who are likely to be the first physicians consulted by patients with back pain.
Keywords. Inflammatory back pain, spondylarthritis, level of awareness.

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Ultrasonographic Study of Distal Joints in Axial Spondyloarthritis

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Background. High-resolution ultrasound (US) has been shown to be more effective than clinical examination in detecting joint synovitis, either joint effusion or synovial hypertrophy. Spondyloarthrites (SpA) is divided into axial and peripheral forms. Axial spondyloarthritis is characterized by the absence of peripheral synovitis.
Objectives. To investigate the presence of subclinical synovitis in patients with axial spondyloarthritis and to compare with a population of controls with no musculoskeletal disorder.
Methods. A cross-sectional monocenter study of patients with axial SpA, according to ASAS criteria for AS determined by the absence of peripheral involvement, or by the presence of joint/enthesis pain without joint swelling. Hip arthritis was considered as an axial involvement. Demographic data were collected as well as the number of swollen joints and lab findings. A standard US scan of the 34 distal joints has been performed for each patient: wrists, metacarpophalangeal, proximal interphalangeal joints, ankles and metatarsophalangeal joints. Positive signs were the presence of joint effusion, joint hypertrophy, with or without a positive Doppler signal, according to the OMERACT definition. A sex- and age-matched population of controls was created in order to detect possible false positive results of US.
Results. A total of 12 patients and 10 controls were evaluated, corresponding to a total of 748 evaluated joints. Mean age of patients was 36.3±7.6 years, mean disease duration 6.8±5.4 years. Bilateral sacro-iliitis was present in all cases. NSAIDs were taken by all the patients, and DMARDs in 2 patients (one patient under sulfasalazine for his hip arthritis and uveitis, and another under methotrexate for his psoriasis); 2 patients were under TNF-inhibitors. Overall, US synovitis was significantly more frequent in SpA patients as compared with controls (4.4% Vs 1.8%; p=0.0026). Among demographic and clinical data of SpA patients, no factor seemed to be predictive of the presence of US subclinical synovitis, considering, however, the small sample size.
Conclusions. The presence of subclinical synovitis in distal joints has been previously reported in rheumatoid arthritis; this is confirmed, to a lesser degree in axial SpA patients. Inclusion of patients/controls is still open in order to determine possible factors associated with the presence of subclinical synovitis. If confirmed, this finding will be challenging in the fact that the definition and the therapeutic strategy in SpA patients may be redefined.
Keywords. Spondyloarthritis, ultrasound, distal joints.

P-183

Efficacy of Pulse Methylprednisolone Therapy in Patients with Ankylosing Spondylitis in Routine Clinical Practice

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Introduction/Objectives. The knowledge on the efficacy of corticosteroid therapy in ankylosing spondylitis (AS) is quite limited. This study aims to investigate the use of pulse methylprednisolone therapy (PMPT) in AS patients with active disease in a "real world" clinical setting.
Material and Methods.
This was a retrospective cohort-based study carried out between January 2011 and August 2012 using patient data from one rheumatology center. Inclusion criteria were confirmed diagnosis of AS according to the modified New York classification criteria, age >=18 years, and having an active disease necessitating treatment with anti-TNF agents according to the regulations of social security agency (BASDAI of >5 despite having had adequate therapeutic trial of at least 3 NSAIDs, including indomethacin, over a 4-week period at maximum recommended dose unless contraindicated), but unable to start treatment with anti-TNF agents due to various causes (patient's reluctance, contraindications, or reimbursement problems). Anonym data from all patients treated with PMPT between the specified dates who fulfilled the inclusion criteria were collected from patient files. Efficacy of PMPT was assessed at baseline and 1 month of PMPT using a range of measures including Bath Ankylosing Spondylitis Disease Activity Index (BASDAI), and acute phase responses (erythrocyte sedimentation rate and C-reactive protein).
Results. A total of 27 (9 female and 18 male) AS patients who had received a total of 39 cycles of PMPT (500-1000 mg per day for 1-3 days) were included in the study. Median age was 33 years and mean disease duration was 5 years. Seventy-four percent of patients had peripheral joint involvement. The percentages of patients receiving concomitant drugs were as follows: low-dose oral corticosteroids (<=10 mg/day) in 70.4%, nonsteroidal anti-inflammatory drugs in 85.2%, sulphasalazine in 81.5%, methotrexate in 37% and antimalarial drugs in 29.6%. At one month of post-treatment period, BASDAI, sedimentation rate and CRP levels were significantly lower than those of baseline values (5.39±1.18 vs. 6.69±1.53, p<0.001; 29±23 vs. 52±27 mm/h, p<0.001; 2.6±2.3 vs. 6.7±4.4 mg/L, p<0.001; respectively). PMPT were well tolerated in our patients. Blood glucose levels in 5 patients and blood pressure in 2 patients increased transiently. Upper respiratory tract infection in 2 patients, nausea and vomiting in 2 patients and oral candidiasis in one patient developed. At mean 9.6 months follow-up, anti-TNF therapy was started in 9 of 27 of those patients.
Conclusions. In patients with AS at active stage of disease, PMPT seems to be effective and safe treatment option. However, larger randomized controlled trials are needed.
Disclosure. Y Karaaslan, None; A Ates, None; K Sahin, None; ZO Aslar, None; F Dortbas, None; C Ozisler, None.
Keywords. Pulse methylprednisolone therapy, ankylosing spondylitis, corticosteroid.

P-184

Rituximab is Non-Inferior to TNF-Inhibitors in Suppressing Sacroiliitis Detected by Magnetic Resonance Imaging in Patients with Ankylosing Spondylitis

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Background. Numerous reports have shown good effect of tumor necrosis factor-alpha (TNF-α) inhibitors in reducing active inflammation of sacroiliac joints (SIJ) detected by magnetic resonance imaging (MRI). However, some patients may not respond. Anecdotal reports have indicated that rituximab can be of potential benefit to decrease clinical manifestations of ankylosing spondylitis (AS), mainly in TNF-α naïve patients. However, there is no data of potential effect of rituximab on active inflammation of SIJ detected by MRI.
Purpose. To compare the effect of TNF-α inhibitors and rituximab to reduce active inflammation of SIJ detected by MRI in patients with highly active AS.
Methods. 15 patients (males-13, mean age 36.3±9.9 years) with highly active AS (BASDAI – 6.19±1.48) with active inflammation of SIJ detected by MRI were treated with rituximab (two infusions, 500-1000 mg depending on body weight and AS activity, separated by 14 days gap). 35 patients (males-30, mean age 34.3±8.6 years) received conventional treatment with TNF-α inhibitors. MRI (1.5 Tesla, T1, STIR) was performed at the baseline and on week 24.
Results. There were no signs of SIJ inflammation on MRI at week 24 in 10 patients (66.7%) treated with rituximab and 19 patients (52.8%) treated with TNF-α inhibitors. The difference between the groups was not significant (p>0.05).
Conclusion. Rituximab is comparable to TNF-α in reducing active SIJ inflammation detected by MRI in patients with highly active AS.
Keywords. AS, rituximab, NSAIDs.

P-185

Nutritional Evaluation of Patients with Ankylosing Spondylitis

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Background. Ankylosing Spondylitis (AS); of unknown etiology, significant inflammation in the spinal joints and adjacent structures, characterized by bony fusion of the spine that leads to progressive and ascending is an inflammatory disease. Environmental, genetic, hormonal, and more unknown by the interaction of many factors that are thought to develop a disease. Among the environmental factors involved in the etiopathogenesis of dietary habits and trends of these patients, follow-up and treatment of disease is important in terms.
Objectives. Our aim in this study of patients with rheumatoid arthritis disease activity of eating habits and these habits (BASDAI) is to investigate the effect.
Methods. In this context Bezmialem Foundation University of Physical Medicine and Rehabilitation Department connected to the rheumatology department admitted to Essgee AS criteria and / or ASAS classification criteria and / or Amor criteria based on the diagnosed 100 AS patients diagnosed nutritional status related forms creating a face to face interview method were filled. This form of patient demographics, disease activity, smoking and alcohol use, concomitant diseases, disease duration, and nutritional status was filled a questionnaire about.
Results. In cases of water consumption, salt, fast food, eggs, milk, yogurt, cheese, wheat, cereal, whole wheat bread, white bread, butter, margarine consumption was recorded. Patients with food consumption was no correlation between the BASDAI (p>0.050).
Conclusion. Further studies with comparison groups and larger samples are needed to explore the promising results of this study before any cause and effect relationship can be determined.
Keywords. Ankylosing Spondylitis, diet, Ankylosing Spondylitis diet.

P-186

Serum Procalcitonin Levels in Patients with Ankylosing Spondylitis

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Aim. Procalcitonin is a marker of bacterial and fungal infection and sepsis. The present study evaluated the relationship between serum procalcitonin levels and disease activity in patients with ankylosing spondylitis (AS).
Method. A total of 61 patients who met the 1984 New York criteria for AS were studied. Twenty-four age- and sex-matched healthy volunteers were recruited to this study as a control group. Disease activity was assessed by the Bath AS Disease Activity Index (BASDAI). The functional status of patients was evaluated by the Bath AS Functional Index (BASFI). Spinal mobility was measured by the Bath AS Metrology Index (BASMI). Erythrocyte sedimentation rate (ESR), C-reactive protein (CRP) and serum procalcitonin levels were measured.
Results. Thirty patients were on anti-tumor necrosis factor-alpha treatment and 31 patients were on conventional treatment. Seventeen (28%) of the AS patients were active (BASDAI >4) and 44 (72%) of the AS patients were in remission. The median ESR was 14 (34–6) mm/h and 4 (7–2) mm/h (p<0.001) for the patient and control groups, respectively. The median CRP level was 0.91 (2.72–0.37) mg/dL and 0.15 (0.25–0.07) mg/dL in the patient and control groups, respectively (p<0.001). Median BASDAI, BASFI and BASMI scores for all AS patients were 3.6 (5.25–2.29), 2.5 (4.22–0.91) and 3 (5–1), respectively. Serum procalcitonin levels were normal (<0.05 ng/mL) for all patients and controls.
Conclusion. Serum procalcitonin levels were not high in AS patients and controls, and the levels were independent of disease activity and medications. If bacterial or fungal infection is suspected in an AS patient, serum procalcitonin level may be useful for diagnosis.
Keywords. Ankylosing spondylitis, infection, inflammatory rheumatic disease, procalcitonin, spondylarthritis

P-187

Effects of Home Exercise and Aerobic Exercise Programs on Spinal Mobility, Quality of Life and Pulmonary in Patients with Ankylosing Spondylitis

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Aim. The involvement of musculoskeletal system and reduced chest expansion cause exercise intolerance in patients with ankylosing spondylitis [AS].The aim of present study was to compare the effects of aerobic exercise and home exercise programs on quality of life and pulmonary functions in patients with AS.
Methods. The study included 40 patients diagnosed as ankylosing spondylitis according to 1984 Modified New York criteria. Pre- and post-exercise chest expansion diameters and finger-to-ground distance scores and BASDAI, BASFI and ASQoL scales were recorded in patients with AS. In all patients, aerobic exercise capacity and pulmonary functions were determined by cardiopulmonary exercise test [CPET].The home exercise group received a program including range of motion, stretching, strength, posture and breathing exercises, while hospital group received aerobic exercise therapy and breathing exercises for 30 sessions [3 sessions per week]. CPET was repeated in both groups after therapy.
Results. There was a significant improvement in chest expansion diameter and finger-to-ground distance scores and BASDAI, BASFI and ASQoL scales after aerobic exercise therapy (p<0,005). Again, significant improvement was observed in VO2max and AT values (p<0,005). There was a significant increase in FVC values (p<0,005), but no significant change was observed in FEV1, FEV1/FVC values (p>0,05).
Conclusions. The decreased aerobic exercise capacity is an important cause of exercise intolerance in patients with AS. Addition of aerobic exercise programs to therapy in patients with AS is essential to improve quality of life in patients with AS.
Keywords. Ankylosing spondylitis, home exercise, aerobic exercise programs, aerobic capacity.

P-188

Characteristics of Non-Attending Patients with Ankylosing Spondylitis

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Background. Ankylosing Spondylitis (AS) patients in routine clinical practice are usually seen at regular intervals (every few weeks to months) depending on their disease activity and type of therapy. However, many patients do not attend the clinic within the recommended time frame.
Objectives. We aimed primarily to assess the AS patients who had not attended the Rheumatology Clinic for more than 1 Year and to compare them with the regularly followed patients, particularly in regard to disease activity, physical functioning and health related quality of life. We also sought to identify the reasons for non-attendance.
Methods. Using hospital records, we identified 514 AS patients (383 M; 44±12.0) who were admitted between January 1, 2008 and December 31, 2011. Of them, 167 (32%) had not attended the clinic within the last year. For the purpose of this study non-attendance was defined as no clinic visits within the last 12 months. Non-attending patients were contacted by phone and were invited to return for assessment. The patients, who did not accept to attend, were interviewed by phone using a semi-structured questionnaire. Disease activity (BASDAI, ASDAS CRP), functional (BASFI, HAQ), quality of life (ASQOL) and mobility (BASMI) measures were examined. The corresponding data for the regularly followed patients were obtained from their last visit. Patients (n=149, 120 M; 43±11.5) on biologic therapy were excluded. Comparisons of categorical data between groups were made using the chi-square test. The Mann-Whitney U test was used to analyze independent continuous data. Wilcoxon test was used to analyze related continuous data. A p value of <0.05 was considered as statistically significant.
Results. Of the non-attending patients, 43 (31 M; 46±11.3) could not be reached after a minimum of 2 phone call attempts; 65 (47 M; 47±13.6) were interviewed by telephone and 59 patients (46 M; 44±10.6) were assessed at the clinic (Table).

The reasons for non-attendance were good symptomatic status (72%), changing physicians (16.1%), moving to another location (6.8%) and health insurance problems (5.1%). Average duration since last attendance was 1.7±0.8 years. There were no differences between the non-attending patients and those who were regular attenders, in respect with age and sex distribution, treatment, ASDAS CRP, BASMI, ASQOL, HAQ, CRP and ESR (Table). Non-attending patients had lower mean BASDAI score at baseline and lower mean BASFI score at last visit.

Conclusions. In this one center study, clinical features of non-attending AS patients, in general are quite similar to those who attended the clinic regularly. Lower BASDAI and BASFI scores in the non-attending patients at baseline and at last visit, respectively may suggest that the non-attending AS patients may have a milder disease course. Strategies should be developed to increase the attendance rate of this group of patients.

Keywords. Ankylosing Spondylitis, Non-Attending, Patients.

Table. Demographics and characteristics of attending and non-attending AS patients.

		Attending Patients (n=198)		Non-attending Patients (n=59)
Age (years; Mean ± SD)		42±12.0		43±10.5
Male gender (%)		65.5		77.9
Duration since diagnosis (years; Mean ± SD)		16±10.9		18±8.7
Family History		32.9		42.3
HLA-B27 positive		40/60 (66.7)		21/28 (75)
NSAIDs (%)		84		80
DMARD (%)		34		22
	Baseline	Last Visit	Baseline	Last Visit
BASFI	2.7 ± 2.5	**3.4 ± 7.0**[3]	2.6 ± 2.5	**2.0 ± 2.4**[3]
BASDAI	**4.1 ± 2.31**[2]	3.9 ± 5.7	**3.5 ± 2.1**[2]	3.4 ± 2.1
BASMI[1]	3.6 ± 1.8	3.4 ± 1.4	3.2 ± 1.9	3.8 ± 2.1
ESR	31 ± 20.7	27 ± 18.1	30 ± 20.1	28 ± 18.9
CRP	16.8 ± 23.0	12.6 ± 17.0	15.4 ± 14.7	14.2 ± 15.8
ASDAS-CRP[1]	3.0 ± 1.0	2.2 ± 1.1	2.8 ± 1.0	2.5 ± 1.0
ASQOL[1]		3.0 ± 5.9		5.0 ± 5.7
HAQ[1]		0.5 ± 0.5		0.4 ± 0.5

[1]n=30 in each group), [2]$p<0.05$ between the baseline BASDAI scores, [3]$p<0.05$ between the latest BASFI scores.

P-189

Prevalence of Comorbidities in Turkish Patients with Ankylosing Spondylitis: Impact on The Health-Related Quality of Life in Terms of Disease Activity, Functional Status, Severity of Pain, and Social and Emotional Functioning

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Background. Ankylosing spondylitis (AS) is an inflammatory rheumatic disease which affects the axial skeleton, causing characteristic inflammatory back pain (1). Patients with AS suffer from comorbidities that result from the disease or its treatment (2).

Objectives. The present study aimed to investigate the prevalence of comorbidities in Turkish patients with AS and evaluate the impact of comorbidities on health-related quality of life (HRQoL) in terms of disease activity, functional status, severity of pain, and social and emotional functioning.

Methods. A total of 85 AS patients (69 males and 16 females) were included in the study. All of the patients fulfilled the modified New York criteria. Patients were evaluated by using Assessment of SpondyloArthritis International Society (ASAS) recommendations for core outcome domains for the assessment in AS. Comorbidities such as uveitis, inflammatory bowel disease, ischemic hearth disease, hypertension, diabetes mellitus, peptic ulcer, osteoporosis, lung diseases, depression and cancers were recorded. 10 cm Visual Analog Scale-Pain (VAS-pain) was used to evaluate the severity of pain. Disease activity was evaluated by using Turkish version of Bath Ankylosing Spondylitis Disease Activity Index (BASDAI). Bath Ankylosing Spondylitis Functional Index (BASFI) was used for determining functional status. HRQoL was assessed by using Short Form-36 (SF-36). Spinal mobility was measured by using Bath Ankylosing Spondylitis Metrology Index (BASMI).

Results. Comorbidities were reported in 37 patients (43.53%). The most common was depression (20 patients, 23.53%). This was followed by peptic ulcer (18 patients, 21.18%), hypertension (16 patients, 18.82%), lung diseases (15 patients, 17.65%), uveitis (14 patients, 16.47%), diabetes mellitus (11 patients, 12.94%), osteoporosis (11 patients, 12.94%), ischemic heart disease (10 patients, 11.76%), inflammatory bowel disease (3 patients, 3.53%), and cancers [1 patient (papillary thyroid carcinoma), 1.18%], respectively. Patients with comorbidities scored significantly higher in BASDAI, BASMI, BASFI, and VAS-pain scores and significantly lower in the physical function, physical role, bodily pain, general health, vitality, social functioning, and emotional role subgroups of SF-36

Conclusions. Comorbid conditions of AS are common. They lead to more active disease, functional impairment and a decrease in quality of life regarding social and emotional functions. Therefore, comorbidities should be detected and treated earlier to reduce its negative impact on outcome in AS.

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Keywords. Ankylosing spondylitis, comorbidity, quality of life.

Table. Prevalence of comorbidities in 85 AS patients (n=37).

Comorbidities	Number (percentage)
Uveitis	14 (16.47%)
Inflammatory bowel disease	3 (3.53%)
Peptic ulcer	18 (21.18%)
Hypertension	16 (18.82%)
Ischemic heart disease	10 (11.76%)
Diabetes mellitus	11 (12.94%)
Lung diseases (asthma, chronic obstructive pulmonary disease)	15 (17.65%)
Osteoporosis	11 (12.94%)
Psychiatric diseases (depression and anxiety disorders)	20 (23.53%)
Cancers	1 (1.18%)

P-190

Disease Activity, Fatigue and Quality of Life in Patients with Coexisting Ankylosing Spondylitis and Familial Mediterranean Fever

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Background/Purpose. Familial Mediterranean Fever (FMF) is an autoinflammatory disorder characterized by recurrent self-limiting episodes of fever, serositis and arthritis. In addition to these clinically overt attacks, an increased subclinical inflammation is observed in patients with FMF during attack-free periods as well. Sacroiliitis can be rarely seen in patients with FMF and absence of vertebral involvement and negativity of HLA-B27 are considered to be main features to differentiate it from spondyloarthropathies such as Ankylosing Spondylitis (AS). Coexistance of FMF and AS is rare and presented as case reports in the literature. Here we would like to assess disease activity, fatigue and quality of life of patients with coexisting AS and FMF.

Methods. Thirty-six AS patients who fulfilled the modified New York criteria were enrolled in the study. Five of these patients had coexisting FMF which was diagnosed according to the Tel-Hashomer criteria. Disease activity was evaluated by Bath Ankylosing Spondylitis Disease Activity Index (BASDAI), functionality was evaluated via Bath Ankylosing Spondylitis Functional Index (BASFI), quality of life was evaluated via Ankylosing Spondylitis Quality of Life Questionnaire (ASQoL), fatigue was evaluated by Multidimensional Assessment of Fatigue scale (MAF).

Results. According to the genetic testing 2 of the patients with coexisting AS and FMF were homozygous for M694V, one patient was compound heterozygote (M694V/V726A) and 2 patients were heterozygotes (M694V and M680I). Four of these patients were positive for HLA-B27 as well. All had radiologically proven sacroiliitis and squaring of vertebrae. Three of these patients also had established syndesmophtes and enthesitis. All of the patients in the AS+FMF group were on regular colchicum therapy and were attack free for at least 6 months. None had amyloidosis. Sixteen of the patients in AS group (51.6%) and 3 of the patients in AS+FMF group (60%) were on anti-TNF medications. For all patients in AS+FMF group, FMF was diagnosed prior to the establishment of the AS symptoms (morning stiffness, inflammatory back pain etc). Symptom duration for AS were similar between 2 groups (11.2±6.38 for AS+FMF group and 11.19±4.66 for AS group p=0.138). BASDAI, ASQoL and MAF scores were

found to be statistically higher in AS+FMF group. For BASDAI mean scores were 6.16±1.50 versus 3.15±2.75 (p=0.021), for ASQoL 12.8±3.89 versus 5.66±6.51 (p=0.017) and for MAF 34.40±9.23 versus 18.58±17.61 (p=0.022). Mean BASFI score was higher in AS+FMF group but did not reach statistical significance (3.44±2.02 versus 2.02±1.8, p=0.63).

Conclusion. Although the number of patients is not enough to draw a definite conclusion presence of FMF in patients with AS impairs quality of life, increases disease activity and worsens fatigue even if the patient is attack free for FMF. This can be due to the smouldering subclinical inflammation which is well known in patients with FMF.

Keywords. Ankylosing Spondylitis, Familial Mediterranean Fever, Fatigue, Quality of life, Disease Activity.

P-191

Patients with Non-Radiographic Axial Spondyloarthritis and Ankylosing Spondylitis Have Similar Burden of Psychological Distress

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Background. Axial spondyloarthritis (axSpA) is a chronic progressive inflammatory disease characterized by predominant axial involvement. AxSpA can be classified in two subsets: the non-radiographic axial spondyloarthritis (nr-axSpA) and AS. In axSpA, many of the symptoms and clinical features (i.e. reduced spinal mobility, stiffness, pain, fatigue, sleep disturbances) may contribute to functional limitations, physical disability, reduced quality of life and psychological distress especially depression and anxiety. Until now, a few studies have reported a significant association between the psychological status and its relationships with functional limitation, health related quality of life and disease activity in AS (1-4). However, to our knowledge there is no prior study in which has compared the psychological status between patients with AS and nr-axSpA.

Objectives. The aim of this study was to investigate the psychiatric status in patients with AS and nr-axSpA and its relationship with self-reported outcome measures and clinical parameters in a cohort of patients with axial SpA

Methods. A total of 316 patients with axSpA were recruited from our spondyloarthritis cohort at Erciyes University. All of the patients met Assessment of SpondyloArthritis International Society (ASAS) classification criteria for axial SpA and assessed by using validated instruments including VAS-pain, BASDAI, BASFI, ASQoL and ASDAS-CRP. Psychological status was evaluated by the Hospital Anxiety and Depression Scale (HADS) which included the depression (HADS-D) and anxiety subscales (HADS-A). Multiple regression analysis was used to determine the associations between psychological variables and clinical parameters.

Results. Of the 316 patients with axial (nr-axSpA=142, AS=174), 139(44%) had high risk for depression and 71 (22.5%) for anxiety. There was no difference in HADS-D and HADS-A scores between patients with AS and nr-axSpA. Both HADS-D and HADS-A scores significantly correlated with clinical parameters including ASQoL, BASDAI, BASFI, VAS pain and ASDAS-CRP. Also, educational level of the patients had a negatively significant correlation with HADS-D and HADS-A scores. The correlation coefficients are shown in Table I. Multivariate logistic regression analysis revealed that the ASDAS-CRP, ASQoL, BASDAI, education level were independent risk factors that influenced the risk of depression whereas the ASQoL and education level were the independent risk factors that influenced the risk of anxiety (Table II).

Table I. Correlation Between the Psychological scores and the Clinical and Laboratory Results in patients with axSpA.

Variables	HADS-D	HADS-A
HADS-A	0.68**	
HADS-D		0.68**
VAS pain	0.18**	0.23**
BASDAI	0.41**	0.46**
BASMI	0.13*	0.09
BASFI	0.38**	0.39**
ASQoL	0.55**	0.59**
ASDASCRP	0.30**	0.31**
Education Level	-0.25**	-0.19**
ESR	0.07	0.09
CRP	-0.006	-0.01

HADS-A: Hospital Anxiety and Depression Scale Anxiety; HADS-D: Hospital Anxiety and Depression Scale Depression; VAS pain: visual analog scale for pain; BASDAI: Bath ankylosing spondylitis disease activity index; BASMI: Bath Ankylosing Spondylitis Metrology Index; BASFI: Bath Ankylosing Spondylitis Functional Index; ASQoL: Ankylosing Spondylitis Quality of Life questionnaire; ASDAS-CRP: Ankylosing Spondylitis Disease Activity Score C-reactive protein; ESR: erythrocyte sedimentation rate; CRP: C-reactive protein. *Correlation is significant at the 0.05 level, ** Correlation is significant at the 0.01 level.

Table II. Odds ratios and 95% confidence intervals for the factors influencing depression and anxiety risk in patients with axial SpA.

Independent factors	Factors for depression			Factors for anxiety		
	OR	95% CI	P	OR	95% CI	P
ASDAS-CRP	2.476	1.062-5.776	0.036	-	-	-
ASQoL	1.222	1.121-1.331	<0.0001	1.329	1.179-1.497	<0.0001
BASDAI	0.313	0.135-0.725	0.007			
Education level						
University	1			1		
Illiterate	6.650	1.360-32.510	0.019	9,307	1.393-62.187	0.021

ASDAS-CRP: Ankylosing Spondylitis Disease Activity Score C-reactive protein; ASQoL: Ankylosing Spondylitis Quality of Life questionnaire; BASDAI: Bath ankylosing spondylitis disease activity index.

Conclusion. Patients with nr-axSpA and AS may have similar burden of psychological distress. ASDAS-CRP, ASQoL, BASDAI and educational level were estimated as the independent risk factors for psychological distress in patients with axSpA. Therefore psychological variables should be considered when assessing self-reported outcome measures in patients with axSpA.

Keywords. Axial spondyloarthritis, depression, anxiety, psychological status.

P-192

Challenges in Treating A Patient with Psoriatic Arthropathy ("Arthritis Mutilans") and Hepatic Involvement

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Objectives. Psoriatic arthritis is a progressive disorder ranging from mild synovitis to severe progressive erosive arthropathy and variable involvement of skin and nails. People with psoriatic arthritis presenting with oligoarticular disease progress to polyarticular disease and a large percentage develop joint lesions and deformities, which progress over time. The treatment of psoriatic arthritis might be difficult due to severity of the disease and the presence of comorbidities.

Methods. We present a 56 years old male, who admitted for arthritis involving PIP, DIP, MCP, wrists, ankles, MTP, dactilytis of 3rd right toe, inflammatory low back pain, extensive erythrodermic psoriasis, onicolisys. The patient has a family history of psoriasis, is a smoker and alcohol consumer and was diagnosed with vulgar psoriasis in 1977 and with psoriatic arthritis in 2001. He was treated with methotrexate, cyclosporine and sulphasalazine with hepatic adverse reactions. In 2010 he was diagnosed with VHB hepatitis ant treated for 6 months with entecavir. He also receives carbamazepine for grand-mal seizures. Important flare of the psoriatic arthritis with extensive skin involvement, acute phase reactants, Ag HBs negative, Hepatitis B core negative and HBV DNA non-detectable (after treatment with Entecavir) directed us to treat him with Infliximab. After screening for TB he had positive Quantiferon Gold test and had to be treated with HIN for chemoprophylaxis.

Results. The patient has a very good evolution under TNF blocking therapy, despite the fact that we determined high levels of antibodies against Infliximab.

Conclusions. Monitoring hepatic function was a big challenge due to multiple liver aggressions, but now the patient continues biologic treatment with monthly evaluation of liver enzymes and DNA VHB determination every 6 months.

Keywords. Psoriatic arthritis, polyarticular, comorbidities, Infliximab, antibodies.

Deformity of the joints

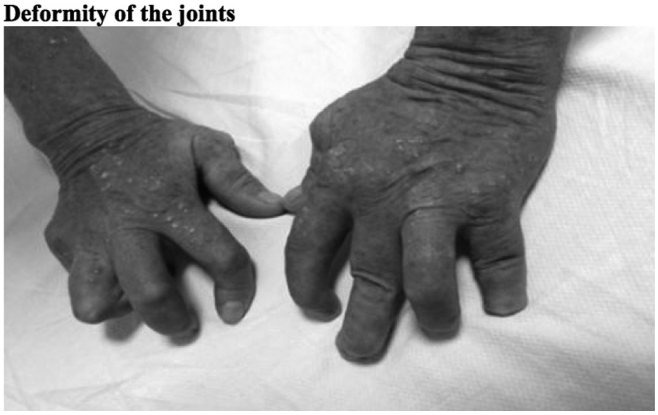

Fig. Deformity of the joints.

P-193

Prevalence and Clinical Significance of Serum Anti-Cyclic Citrullinated Peptide Antibodies in Patients with Seronegative Spondyloarthritis

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Background/Objective. This study was carried out to determine the clinical and demographic characteristics of the two most frequent sub groups of SpA – ankylosing spondylitis (AS) and undifferentiated spondyloarthritis (uSpA) – for the Turkish population, and also to investigate the frequency of anti-cyclic citrullinated peptide antibody (anti-CCP) positivity, which has recently been included in the diagnostic criteria of rheumatoid arthritis.
Methods. Two hundred patients with uSpA ve AS who were referred to the Rheumatology outpatient clinic of Yıldırım Beyazıt University Atatürk Training and Research Hospital between January 2010 and January 2014, 100 control patients with the diagnosis of RA and 100 healthy volunteers were included. For each patient, the detailed medical histories, the physical examinations, rheumatologic examinations, whole blood counts, erythrocyte sedimentation rates (ESR), C-reactive protein (CRP), anti-CCP, routine biochemical tests, HLA-B27 test results, foot x-rays, sacroiliac x-rays and sacroiliac MRI imaging studies were evaluated. ASDAS and BASDAI scores and morning stiffness were used to evaluate the disease activity. Patients and controls were compared with regards to the demographic characteristics, some laboratory findings, MPV (mean platelet volume) and anti-CCP results.
Results. Of the two hundred SpA patients, 125 were females (62.5%) and 75 were males (37.5%), while in the RA control group 66 were females (66%) and 34 were males (34%) and in the healthy control group 66 were females (66%) and 34 were males (34%). The median age of the patients in the AS group was 45 years (19-79), 49.5 years (20-68) in the uSpA group, 55 years (20-80) in the RA control group and 42 years (18-64) in the healthy control group. Positive HLA-B27 genetic test results were found as 55% in the AS group and 25% in the uSpA group with a significant difference between the two groups (p<0.001). The axial joint involvement according to sacroiliac MRI finding was 100% in the AS group, while it was 45% in the uSpA, and significant difference was found between these two groups (p=0.008). Anti-CCP result in the RA group was positive in 56% and was significantly higher as compared to other groups (p<0.001). Frequency of anti-CCP positivity was significantly higher in patients with AS and uSpA groups than those of the healthy control (p<0.001). No significant correlation was found between the anti-CCP results and the ESR, CRP, BASDAI and ASDAS results in the SpA group. MPV value was found to be lower in SpA and RA patients compared to the healthy population. Furthermore, significant negative correlation was found between MPV and the values of ESR, CRP and anti-CCP (r=0.22, p<0.001; r=0.3, p<0.001, r=0.18, p=0.001).
Conclusions. In conclusion, positive anti-CCP results were significantly higher in AS and uSpA patients compared to the healthy group; however, no relationship was found between anti-CCP with disease activity indices.
Keywords. Ankylosing spondylitis, undifferentiated spondyloarthritis, cyclic citrullinated peptide antibody.

P-194

Frequency of Radıological Hıp Involvement and Total Hip Replacement in a Large Single Center Spondyloarthritis Cohort with Biological Treatments: HÜR-BİO Real Life Results

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Background. Total hip replacement (THR) is a favorable treatment option for severe ankylosing spondylitis (AS). However, THR may be an option for another spondyloarthritis (SpA) such as psoriatic arthritis (PsA) and enteropathic arthritis. Sometimes, patients and physicians may be delayed THR operation time for different reasons.
Objectives. To assess frequency of THR and hip involvement in a single center spondyloarthritis (SpA) biological database and evaluate unmet THR operation ratio in SpA.
Method. HÜR-BİO (Hacettepe University Rheumatology Biologic Registry) is a single center biological registry since 2005. HÜRBİO biological database included demographic data, co-morbidities, smoking status, baseline and follow-up disease activity parameters (such as BASDAI, BASFI, CRP, ESR, global VAS). Available digital radiographic imaging of pelvis in this database were reassessed for hip involvement and THR by a physician (UK). The need of THR was based on the presence of one or two replaced hips. Kaplan-Meier plots and log rank tests were used to assess TNFi drug survival in patients with and without hip involvement.
Results. Seven hundred sixty eight of 1290 (59.5%) SpA patients had available pelvis radiography. Four hundred fifty of 768 (58.6%) patients were male and mean age was 41±11 years old, mean disease duration 8.6±6.9 years, mean TNFi duration was 32±29 months. Patients with AS, non-radiographic axial SpA (nr-axSpA), PsA and enteropathic arthritis were 556 (72.4%), 91 (11.8%), 84 (10.1%) and 37 (4.8%), respectively (Table I). Frequency of THR and need of THR were shown in Table I. Radiological hip involvement and severe hip involvement found in 125 (16.3%) and 65 (8.4%) patients, respectively. Patients with severe hip involvement was older age 47±11 vs 41±11, p<0.001, longer disease duration 15±9 vs 8±6 years, p<0.001, more frequently male (47/65 (72.3%) vs 402/702 (57.3), p=0.018), more frequently advanced spinal disease 18/52 (34.6%) vs 74/576 (12.8%), p<0.001. Baseline disease activity parameters were similar with and without severe hip involvement, however, last visit CRP (2.56±2.75 vs 1.06±1.97 mg/dl, p<0.001), ESR (24±25 vs 13±14 mm/hour, p<0.001) and BASFI (4.7±2.8 vs 2.4±2.1, p<0.001) were higher in severe hip involvement. Disease duration was found independent risk factor for severe hip involvement (OR 1.13 ((95%CI 1.09-1.17). In all SpA patients, TNFi drug survival was similar with and without severe hip involvement.
Conclusions. Severe hip involvement was demonstrated either AS or other spondyloarthritis such as PsA, enteropathic arthritis. THR performed almost 5 percent of AS, PsA and enteropathic arthritis under TNFi treatments. On the other hand, substantial of AS patients who need THR were not operated yet. The reasons of this delay may be responsible of patients' perspective (e.g fear of operation) or physicians (e.g ignore of patients' pain and functional impairment). TNFi may not reflect any major unfavorable effect of THR.
Keywords. Ankylosing spondylitis, spondyloarthritis, hip replacement.

Table I. Frequency of hip involvement in spondyloarthritis.

	AS n=556	Axial SpA n=91	PsA n=84	IBH related SpA n=37
Hip narrowing	55 (9.9)	1 (1.1)	3 (3.6)	1 (2.7)
THR	32 (5.7)	1 (1.1)	5 (5.9)	2 (5.4)
Candidate of THR	21 (3.8)	1 (1.1)	0 (0)	3 (8.1)
Total hip involvement	108 (19.4)	3 (3.3)	8 (9.5)	6 (16.2)

P-195

Comparative Analysis of Spondyloarthritis (SPA) Associated with Familial Mediterranean Fever (FMF) and Behcet Disease (BD): 50 Year-Experience

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Background. FMF and BD are prevalent in Turkey and share many rheumatological features. Since 1963 we have demonstrated the association of peripheral arthritis(PA),sacro-iliitis(SI) and ankylosing spondylitis(AS) in both diseases.
Purpose. We aimed to re-evaluate the association of SpA with FMF and BD,and propose our nosological view on the SpA classification.
Methods. Our cohort was composed of 544 cases of FMF and 624 cases of BD. All patients were analyzed for demographic, clinical and radiological findings compatible with SpA. Articular involvements were defined as peripheral, sacroiliac (SI) and axial. Cases with axial involvement meeting the New York Criteria were diagnosed as AS. Degree of sacroiliitis and axial involvement were noted in all. Family history for the main disease, AA amyloidosis and HLA-B27 were also recorded.
Results. In this series of patients, PA was found in 49.6% of FMF and 48.6% of BD groups, SI involvement (not including cases with AS) in 18.4% of FMF and 31.7% of BD, and AS in 13.2% of FMF and in 7.7% of BD groups. Severity and frequency of AS and amyloidosis were found to be much higher in patients with FMF than those with BD. On the other hand,HLA-B27 was significantly higher in patients with AS associated with BD.
Conclusions. In addition to our previous reports, re-evaluation of the clinical findings demonstrate that FMF and BD are associated with Spa, and these findings have been confirmed by many investigators mostly from Turkey. Recent genetic findings revealing associations between BD and IL23R,ERAP1,IL10 as well as HLA Class I antigen(B*51) support the SpA association. We therefore propose that FMF and BD should be included into SpA spectrum.
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Keywords. Familial Mediterranean Fever, Behcet Disease, Spondyloarthritis.

P-196

Clinical Diagnosis of Ankylosing Spondylitis or Axial Spondyloarthritis is in Concordance with ASAS Criteria for Axial Spondyloarthritis: Results from A Single Tertiary Referral Centre in Croatia

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Background. The Assessment of Spondyloarthritis International Society (ASAS) group has recently developed criteria to classify patients with axial spondyloarthritis (axSpA).
Objective. To evaluate concordance of clinically established diagnoses of ankylosing spondylitis (AS) or axSpA with ASAS criteria for axSpA with in a single tertiary referral centre for spondyloarthropathies in Croatia.
Methods. The sample consisted of 588 patients who were diagnosed with AS (331 patients) or axSpA (257 patients) at the Department of Rheumatology, Physical Medicine and Rehabilitation, University Hospital Center Sestre Milosrdnice in Zagreb from Jan 2010 to Apr 2014. The average age of the patients was 53,86±12,55 years (for AS 55,25±12,44 years; for axSpA 52,05±12,48 years). Data from the original charts were collected and all the variables of the ASAS criteria for axSpA were searched for: chronic low-back pain, evidence of radiographic sacroileitis, HLA B27 positivity, inflammatory back pain (IBP), presence of arthritis, enthesitis, uveitis, dactylitis, psoriasis, inflammatory bowel disease (IBD), positive effect of NSAIDs, family history, elevated serum C-reactive protein. Presence of clinical SpA features was confirmed by a rheumatologist.
Results. The disease duration was 136,66±120,583 months and was significantly shorter for AS (147.71±122.67 years) than for ax SpA (122.77±116,68 years(p<0.05). The diagnosis was established at the age of 47,72±12,99 years and in that moment patients with AS were younger (46,76± 13,36 years) than patients with axSpA (48,95±12,41 years) (P<0.05). Sacroileitis (on X-rax and MRI) was observed in 94.9 % of patients in AS group and in all patients with axSpA. HLA-B27 positive antigen was found in 23% patients with AS and 50.5% patients with axSpA. In AS group other features of SpA were observed in following percentages of patients: IBP- 69.6%, arthritis - 86.1%, enthesitis – 56.3%, uveitis - 12.4%, dactylitis - 14.3%, psoriasis 4.8%, IBD - 4.4%, positive effect of NSAIDs – 78.9% and positive family history – 30.8%. In axSpA group, SpA features were observed in following percentages of patients: IBP – 30.4%, arthritis – 13.9%, enthesitis – 43.7%, uveitis – 87.6%, dactylitis – 85.7%, psoriasis – 95.2%, IBD - 95.4%, positive effect of NSAIDs – 21.1 %, positive family history – 69.2%. Applying ASAS criteria in both AS and axial SpA groups and using sacroileitis as entry criterion 24 patients (4.3 %) with positive finding and 3 patients (10%) with negative findings did not meet ASAS criteria. Furthermore, in both AS and axial SpA groups only patient among HLA-B27 positive patients and 28 (9.4%) of them in HLA 27 negative group did not fulfill ASAS criteria for ax-SpA.
Conclusions. We observed that the clinical diagnosis of ax-SpA or AS was in concordance with ASAS classification criteria. ASAS criteria for ax-SpA can be helpful for routine clinical practice.
Keywords. Ankylosing spondylitis, axial spondyloarthritis, diagnosis, criteria, ASAS, Croatia.

P-197

Serum Total Oxidative Status, Total Antioxidant Capacity and Paraoxonase, Salt Stimulated Paraoxonase and Aryl Esterase in Patients with Undifferentiated Spondyloarthritis and Ankylosing Spondylitis

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Background. Oxidative stress may play a role in the pathogenesis of some rheumatologic diseases. Although there have been few studies assessing the levels of TAS, TOS, PON, SPON and ARES in patients with ankylosing spondylitis (AS), there is no study evaluating the oxidative stress in patients with undifferentiated spondyloarthritis (uSpA).
Objective. This study aims to investigate the levels of oxidative stress parameters as TAS, TOS, PON, SPON and ARES in patients with uSpA and AS and their relationship with parameters indicating disease activity.
Methods. This study includes 59 patients with AS and 61 patients with uSpA presenting to rheumatology outpatient clinic of Yıldırım Beyazıt University Atatürk Education and Research Hospital between December 2013 and February 2014 as well as 73 healthy volunteers. Patient's age and sex, current illness and diagnosis, chief complaint, drug use, family history, evidence of enthesopathy, and eye involvement were all recorded.
Foot radiography, sacroiliac graph and MRI of patients were evaluated. Complete blood count test, ESH, CRP, HLA-B27 values and biochemical parameters were all studied. TAS, TOS, PON, SPON and ARES levels were also studied for the evaluation of oxidative stress and antioxidant system. Patients and control groups were compared in terms of their demographic features, laboratory results and levels of TAS, TOS, PON, SPON and ARES.
Results. The average age of uSpA patients were 45,7±11,8 year, while AS patients had an average of 44,0±12,1 year. 40,7% of AS patients were females and 59,3% were males while 80,6% of patients in uSpA group were females and 19,4% were males. HLA-B27 was found to be positive in 6 (14,3%) of 42 patients with uSpA and in 20 (50,0%) of 40 patients with AS. When compared to control group, serum TOS level in patients with AS and uSpA has been found to be significantly high; however there was no significant difference in terms of serum TAS, PON, ARES and SPON levels. For AS and uSpA patients, no correlation was found between serum TAS, TOS, PON, ARES and SPON levels and ESH, CRP, BASDAI, ASDAS as indicators of disease activity. There was no difference in terms of serum TAS and TOS levels in AS patients using anti-TNF drugs compared with patients treated with conventional DMARDS.
Conclusion. Increase in TOS levels in SPA patients show that oxidative stress may play a role in the pathogenesis of SPA. In a study from Turkey, while serum TOS levels were high, TAS levels were found to be low in AS patients (1). In another study, TAS levels have been found to be low in AS patients compared with healthy controls (2).
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Keywords. Ankylosing Spondylitis, Undifferentiated Spondyloarthritis, Paraoxonase, Aryl esterase, Oxidative Stress.

Table I.

VARIABLE	ASpA (n:62)	AS (n:59)	control (n:73)	*p*
TAS	1,79 ± 0,16	1,80 ± 0,19	1,75 ± 0,19	0,333
TOS	5,6 (3,02)	5,4 (2,95)	4,4 (2,03)	<0,001
PON	166,1 (203,62)	215,4 (204,00)	126,7 (156,30)	0,049
SPON	444,2 (664,90)	695,1 (609,10)	312,5 (491,45)	0,058
ARES	212,9 (62,25)	221,7 (51,10)	232,4 (80,50)	0,388

Comparison of levels of oxidant-antioxidant parameters between groups.

P-198

Use of Complementary and Alternative Medicine (CAM) in a group of Patients with Rheumatoid Arthritis and Ankylosing Spondylitis

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Background. The use of complementary and alternative medicine (CAM) is common among Turkish patients since centuries. Herein, we aimed to evaluate the disease specific use of complementary and alternative medicine (CAM) in a group of patients with rheumatoid arthritis (RA) and ankylosing spondylitis (AS).
Methods. Demographic properties comprising age, sex, education of the patients were recorded. A comprehensive questionnaire assessing the use of CAM were performed to AS and RA patients (n=195) who were admitted to rheumatology division. Patients aged 18 and older and subjects receiving treatment for their disease were included. Patients were randomly selected on the random days of four months from January 2014 to April 2014. Descriptive analyzes were used demographic and quantitative data and expressed as mean+SD and percentage. The differences between groups were analyzed with t tests and chi square tests for continuous and categorical variables respectively.
Results. Eighty-nine AS (59 male, 30 female) and 106 RA patients (16 male, 90 female) were recruited. 34 (38%) of AS patients and 38 (36%) of RA patients had used CAM ever. The most commonly used CAM was herbal products in both groups. Among CAM users 41% of them were graduated from a university. 29.5% of CAM non-users reported that they did not believe in unproven treatments, 27% were satisfied with the conventional treatments and 20% of patients had never thought about the CAM usage before. Comparing the AS and RA patients, there were no significant difference between reasons for not using CAM (p=0,15).The most common reason for CAM usage was aiming a physically well-being state and relieving the "pain". 5 (13%) of the RA patients and 8 (23,5%) of AS patients have experienced harmful side effects during CAM usage, with no significant difference between two groups. Of CAM users, 15 (39,5%) RA patients and 12(35%) AS patients described CAM satisfaction as "I am not satisfied at all" while just a few number of patients "I am very satisfied with CAM usage". 25 (50%) of CAM users were advised by their family and friends to use CAM. Both in RA and AS patients there were no difference between men and women in terms of using CAM.
Conclusions. To improve their pain, almost half of the patients use CAM in addition to conventional treatments but only a few number of patients reported to have benefit from CAM usage and also some had harmful side effects. The subject of using or not using CAM in chronic rheumatic conditions is controversial but we suggest the awareness and detailed assessment of CAM usage among health professionals, treating patients with RA or AS.
Keywords. Complementary and alternative medicine, rheumatoid arthritis, ankylosing spondylitis.

P-199

Patients with Psoriatic Arthritis Had Better TNFi Survival Than Ankylosing Spondylitis: HÜR-BİO Real Life Results

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Background. TNFi drug survival is one of the valid outcome measure in rheumatological diseases. Patients with psoriatic arthritis (PsA) usually have both joint/back pain diseases and skin disorders. Thus, efficacy of TNFi may be related with joint and skin disease. In fact, PsA patients have different way from ankylosing spondylitis.
Objectives. Objective of this study was to compare TNFi drug survival in PsA and ankylosing spondylitis (AS).
Methods. HÜR-BİO (Hacettepe University Rheumatology Biologic Registry) is a single center biological registry since 2005 in Turkey. Data collected includes demographic data, co-morbidities, smoking, switch ratio, baseline and follow-up disease activity parameters (such as BASDAI, BASFI, CRP, ESR, global VAS, swollen joint count ad tender joint count). If patients took TNFi drugs last 6 months, patient accepted as ongoing TNFi treatment. Kaplan-Meier plots and log rank tests were used to assess drug survival.
Results. There were 630 AS and 119 PsA [30 (25.2%) psoriatic spondylitis] patients with TNFi in this database. Mean age in PsA and AS were 45±11 vs 41±11 years (p=0.005). Mean disease duration in PsA and AS were 7.1±5.6 vs 9.7±7.2 years (p<0.001). AS patients were more frequently male 415/630 (65.8%) vs 34/119 (28.6%), p<0.001. Mean TNFi duration was similar in PsA and AS patients 29±29 vs 34±31 months, p>0.05. TNFi drugs in PsA and AS patients were adalimumab (36.1% vs 23.1%), etanercept (27.7% vs 38.1%), infliximab (26.9% vs 34.4.%) and golimumab (8.4% vs 4.1%), p<0.001. PsA patients were used more frequently DMARDs than AS patients [methotrexate 48.2% vs 6.9%, p<0.001, leflunomide 20.1% vs 0.9%, p<0.001, sulphasalazine 14.0% vs 25.4%, p>0.05]. Patients with PsA had higher TNFi switch rate than AS patients 45/116 (38.8%) vs 154/578 (26.6%), p=0.008. Baseline ESR 30±26 vs 33±23 mm/hour, CRP 2.39±3.27 vs 3.70±7.24 mg/dl, BASDAI score 5.6±2.0 vs 5.6±1.8 and BASFI score 4.2±2.9 vs 4.4±2.6 were similar in PsA and AS patients. However, tender joint counts 5.2±5.4 vs 0.29±0.96, p<0.001 and swollen joint counts 2.54±2.73 vs 0.58±0.27 p<0.001 were higher in PsA patients. Patients with PsA had better drug survival than AS patients (log rank 0.012) (Figure 1).
Conclusions. TNFi drug survival is better in PsA than AS patients. Distribution of TNFi and DMARDs, switch rates may be responsible from those results. However, we thought t.
Keywords. Psoriatic arthritis, TNF blockers, survival.

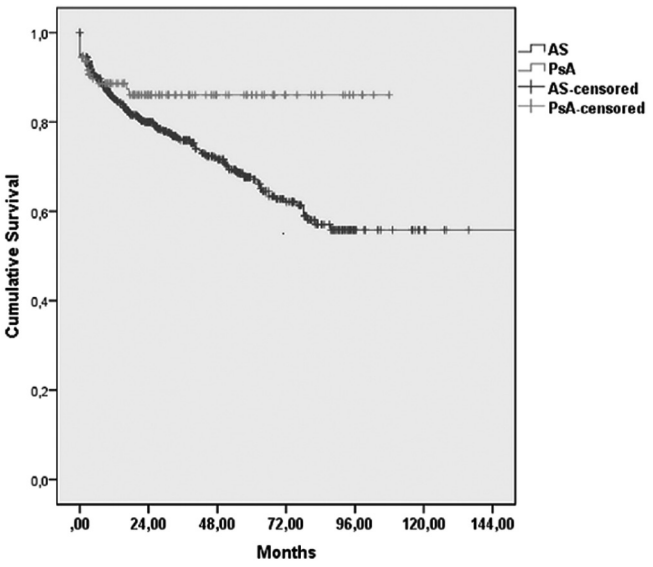

Fig. 1.

P-200

Risk Factors of Advanced Spinal Disease and/or Bamboo Disease in Patients with Ankylosing Spondylitis during TNFi Treatments: HÜR-BİO Real Life Results

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Background. Spinal ankylosis is most important reason of functional impairment in ankylosing spondylitis (AS). In routine practice, all patients who learned diseases's name ask ankylosing posture and risk factors for ankylosis. Thus, risk factors of ankylosing posture is a priority for patient perspective
Objectives. To assess risk factors of advanced spinal ankylosis (ASA) in patients with AS during biological treatment.
Methods. HÜR-BİO (Hacettepe University Rheumatology Biologic Registry) is a single center biological registry since 2005 in Turkey. Here, patients analysed were AS patients treated with TNFi. Data collected includes demographic data, co-morbidities, smoking, baseline and follow-up disease activity parameters (such as BASDAI, BASFI, CRP, ESR, global VAS). There are 630 AS patients with TNFi in this database. Available digital radiographic imaging of lumbar spine radiographies were reassessed for spinal ankylosis by a physician (UK). Two intervertebral adjacet bridges and/or fusion at the lumbar spine defined advanced spinal disease, and typical bamboo view defined as bamboo spine. Univariate and multivariate analysis were performed to determine risk factors in ASA.
Results. In all, 530 (65.9% male) patients were analyzed. Mean age was 41±11 years old, mean disease duration was 9.7±7.2 years. Mean TNFi duration was 37±30 months. At least one syndesmophyte was found in 248 (46.8%); 99 (18.7%) patients had ASA (60 bamboo spine, 39 advanced spinal disease). Patients with ASA were older (51±9 vs 39±10 p<0.001), had a longer disease dura-

tion (16±9 vs 8±6 years, $p<0.001$), were more frequently male (84/99 (84.8%) vs 263/431 (61.0%), $p<0.001$), with higher weight (79±13 vs 74±14 kilogram, $p=0.002$), more radiological hip involvement (39/91 (42.8%) vs 54/376 (14.3%), $p<0.001$), severe hip involvement (17/91 (18.7%) vs 25/376 (6.6%), $p<0.001$), more frequently uveitis (17/80 (21.2%) vs 37/329 (11.2%), $p=0.018$), hypertension (20/80 (25%) vs 33/329 (10.0%), $p<0.001$), amyloidosis (6/80 (7.5%) vs 5/330 (1.5%), $p=0.001$), smoking (11.7±13.8 vs 6.5±9.5 packet-year, $p<0.001$). Baseline disease activity parameters were similar with and without advanced spinal ankylosis [BASDAI 5.7±1.6 vs 5.7±1.7, $p>0.05$, BASFI 5.2±2.5 vs 4.5±2.5, $p>0.05$, ESR 35±21 vs 32±23 mm/hour, $p>0.05$, CRP 3.4±4.6 vs 3.1±3.0 mg/dl, $p>0.05$]. However, last visit CRP (1.94±3.57 vs 1.08±1.62 mg/dl, $p=0.003$) and BASFI (3.99±2.51 vs 2.43±2.18, $p<0.001$) were higher in ASA group. Multivariate analysis shown that male sex OR 4.3 (95%CI 1.9-9.8), age OR 1.1 (95%CI 1.07-1.14) and disease duration 1.1 (95%CI 1.05-1.15) were independently associated with ASA.

Conclusions. In our database, ASA is a frequent condition in this group of AS patients treated with TNFi. Male sex and higher disease duration were important risk factors for ankylosis, as expected. Although in those patients, disease activity was suppressed after TNFi, impaired functional capacity was still apparent for those ASA.

Keywords. Ankylosing spondylitis, advanced spinal ankylosis, TNF blockers.

P-201

Increase in Chest Expansion Leads to Increase in Exercise Tolerance in Patients with Ankylosing Spondylitis

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Pulmonary function (PF) is influenced with restriction of chest expansion in patients with ankylosing spondylitis (AS). Reduced chest mobility leads to restrictive type pulmonary deficiency which also means exercise intolerance. The aim of this retrospective cross sectional study is to examine the pulmonary involvement of patients with AS and its relation to BASMI, BASDAI, BASFI, exercise capacity along with psychological evaluation before and after rehabilitation program and compare the results to patients with interstitial lung disease(ILD). 19 AS and 17 ILD patients were evaluated with 6minutes walking test (6MWT), MET (with modified Bruce protocol), chest expansion, pulmonary function tests, Beck depression inventory, SF-36, BASDAI, BASFI, BASMI before and after rehab program. After informed about pulmonary rehabilitation, each patient received 30 sessions of rehabilitation program consisted of exercise (both posture and inspiration) and bicycle ergometer according to each of their MET and maximum heart rate parameters. Mann Whitney U test, Wilcoxon Ranks Test and Spearman's Correlation analysis were used.

Table. Study Results.

		As (n=19) Mean±SD (Median)	İLD (n=17) Mean±SD (Median)	a. p
BECK before		11,79±6,29 (10)	13,65±7,85 (11)	0,484
BECK after		8,53±7,38 (7)	12,12±7,42 (9)	0,095
	b. p	0,001**	0,002**	
BECK difference		-3,26±3,46 (-3)	-1,53±1,28 (-2)	0,021*
SF-36 Physical before		43,64±11,50 (41,3)	43,64±11,50	(41,3)
33,45±11,43 (30)	0,010*			
SF-36 Physical after		46,96±9,36 (46,9)	35,81±11,18 (33,6)	0,002**
	b. p	0,001**	0,001**	
SF-36 Mental before		44,48±8,59 (45,4)	41,81±9,63 (40,5)	0,476
SF-36 Mental after		45,72±7,55 (47,60)	44,05±9,65 (43,30)	0,601
	b. p	0,022*	0,001**	
6 MWT before		350,00±122,38 (360)	215,41±124,85 (250)	0,009**
6 MWT after		439,47±136,99 (420)	242,76±149,26 (215)	0,002**
	b. p	0,001**	0,005**	
6 MWT difference		89,47±46,42 (75)	27,35±58,96 (35)	0,001**
MET before		12,24±1,74 (12,90)	5,65±3,25 (4,60)	0,001**
MET after		12,66±1,66 (12,90)	6,04±3,56 (4,60)	0,001**
	b. p	0,008**	0,008**	
MET difference		0,42±0,72 (0)	0,39±0,56 (0,20)	0,932
Chest expansion before		24,47±8,80 (25)	20,65±6,60 (20)	0,181
Chest expansion after		34,58±10,98 (35)	24,41±7,71 (25)	0,008**
	b. p	0,001**	0,001**	
Chest expansion difference		10,10±5,44 (10)	3,76±3,11 (3)	0,001**
FEV1 before		101,13±13,30 (99,1)	64,84±23,66 (55,2)	0,001**
FEV1 after		102,38±14,45 (98,6)	66,88±24,11 (60)	0,001**
	b. p	0,409	0,020*	
FEV1 difference		1,25±7,24 (2,5)	2,05±3,10 (2,40)	0,862
FVC before		100,02±13,25 (96,6)	64,62±25,39 (56)	0,001**
FVC after		102,04±14,72 (99)	66,93±24,35 (57)	0,001**
	b. p	0,744	0,014*	

a. Mann Whitney U Test, b. Wilcoxon Signed Ranks Test $p<0,05$* $p<0,01$**.

AS group had statistically significant improvement in all parameters, except pulmonary tests (FVC, FEV1) unlike patients with ILD. Chest expansion significantly improved in both groups ($p<0.001$) 6MWT also improved in AS and ILD significantly ($p<0.001$, $p<0.005$ respectively), besides 6MWT was found correlated with chest expansion (r=0.597 <0.001).

Since spinal mobility affects pulmonary functions in AS patients, chest expansion with its correlation to 6MWT explains the importance of pulmonary rehabilitation while taking its place in AS therapy protocols.

Keywords. Ankylosing Spondylitis, Interstitial Lung Disease, Pulmonary Rehabilitation, Chest expansion, 6 minute walk test.

P-202

Delayed Diagnosis: Related Factors and Outcomes in Patients with Ankylosing Spondylitis

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Background. Ankylosing spondylitis (AS) is one of the rheumatic diseases with the longest diagnostic delay. Improving knowledge about diagnostic delay status and related factors and outcomes may help clinicians diagnose AS in earlier stages.

Objectives. To assess the diagnostic delay, related factors and outcomes in an Iranian population with AS.

Methods. A total of 163 patients with AS diagnosed by modified New York 1984 were participated consecutively in a cross sectional survey. A pre-designed form was applied for gathering data. The measured outcomes were included: Bath AS functional index (BASFI), AS quality of life (ASQoL), Bath AS metrology index (BASMI), Bath AS disease activity index (BASDAI), chest expansion and sacroiliitis grading by pelvic radiography.

Results. The average (mean±SD) diagnostic delay was 7.88±7.17 years. Diagnosis delay was longer in patients with enthesitis versus without enthesitis ($p=0.007$) and in B*27 negative versus B*27 positive ones ($p=0.01$). Educational level was inversely correlated with diagnosis delay ($p=0.002$, r=-0.24). Diagnostic delay was also correlated with following outcomes: BASMI ($p<0.001$, r=0.41), BASFI ($p=0.003$, r=0.23), ASQoL ($p=0.008$, r=0.21), BASDAI ($p=0.03$, r=0.18), chest expansion ($p<0.001$, r=-0.38) and sacroiliitis grading ($p=0.04$, r=0.16).

Conclusions. Low education, negative HLA-B*27 and enthesitis are the factors affect the diagnosis delay in Iranian patients with AS. The grater delay in diagnosis of AS, the more likely that poorer QoL, worse function, higher disease activity and more severe limitation in spinal mobility would become apparent. National referral strategies for patients with enthesitis (particularly low educational level) should be provided to use by related physicians.

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Keywords. Ankylosing spondylitis, Delayed diagnosis, Outcome, Quality of life,

P-203

Retention Rate of TNF-blockers is Greater in Case of Advanced Spinal Ankylosis in Axial Spondyloarthritis: Data from the HÜR-BİO Registry

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Background. Spinal ankylosis is one of the important factor responsible of functional impairment in ankylosing spondylitis (AS). In advanced disease, there is still the debate of the potential benefit of use of TNF blockers since one could expect irreversible disability.
Objectives. To evaluate the TNF blocker retention rate in AS patients with regard to the presence of spinal ankylosis
Methods. a) Patients; AS patients receiving any anti TNF blocker since 2005 and included in the HÜR-BİO (Hacettepe University Rheumatology Biologic Registry: a single center biological registry) b) Data collected at baseline included demographics, co-morbidities, smoking status, TNF blochers (infliximab, etanecept, adalimumab and golimumab), available disease activity parameters (such as BASDAI, BASFI, CRP, ESR, global VAS). Available digital radiographic imaging of lumbar spine radiographies were reassessed for spinal ankylosis by a single physician (UK). Advanced spinal ankylosis was defined as the presence of at least two intervertebral adjacent bridges at the lumbar spine level (1). The date of initiation and the date of discontinuation (or the date of the last visit under therapy) of the TNF blocker was collected. c) Analysis: A part from the comparison of the baseline characteristics in the two groups of patients (with or without advanced spinal ankylosis), retention rate was evaluated using the Kaplan-Meier technic and log rank tests were used to compare such retention rate in the different groups of patients with regard to the presence and the severity of the ankylosis.
Results. Since 2005, TNF blocker therapy was initiated in 630 patients, lumbar radiography was available in 530 of them (male: 66%; age: 41±11 years old; disease duration was 9.7±7.2 years). Advanced spinal ankylosis was observed in 99 (19%%) patients. Patients received either etanercept [199 (37.5%)], infliximab[192 (36.2%),], adalimumab [117 (22.1%)]or golimumab [22 (4.2%)] Baseline disease activity parameters were similar in the two groups of patients: [BASDAI score 5.7±1.6 vs 5.7±1.7, p>0.05, BASFI score 5.2±2.5 vs 4.5±2.5, p>0.05, ESR 35±21 vs 32±23 mm/hour, p>0.05, CRP 3.4±4.6 vs 3.1±3.0 mg/dl, p>0.05 in the patients with versus without advanced spinal ankylosis, respectively]. However, CRP level (1.94±3.57 vs 1.08±1.62 mg/dl, p=0.003) and BASFI score (3.99±2.51 vs 2.43±2.18, p<0.001) were higher in advanced spinal ankylosis group at last visit. Mean TNFi duration was 37±30 months. Patients with advanced spinal disease had better drug retention rate in comparison to the patients without such spinal ankylosis(logRank p=0.020) (Figure 1).
Conclusions. Our data confirm the efficacy of TNF blockers even at advanced phase of the AS disease with a drug retention rate even greater in comparison the one in patients without spinal ankylosis. Further studies are required in order to address the benefit of physical therapy in these patients receiving a TNF blocker
Keywords. Spinal ankylosis, ankylosing spondylitis, TNF blockers.

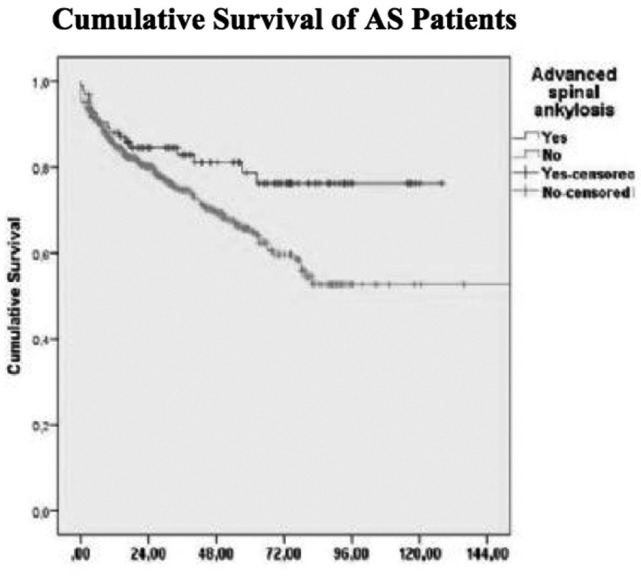

Fig. 1. Cumulative Survival of AS Patients.

P-204

Patients with Ankylosing Spondylitis and Non-radiographic Axial Spondyloarthritis Had Similar TNFi Drug Survival: HÜR-BİO Real Life Results

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Background. TNFi drug survival is one of the valid outcome measure in rheumatological diseases. TNFi drug survival is not evaluated adequately in non-radiographic axial spondyloarthritis (nr-axSpA).
Objectives. Objective of this study was to compare TNFi drug survival in ankylosing spondylitis (AS) and (nr-axSpA).
Methods. HÜR-BİO (Hacettepe University Rheumatology Biologic Registry) is a single center biological registry since 2005 in Turkey. Data collected includes demographic data, co-morbidities, smoking, switch ratio, magnetic resonance imaging (MRI), HLAB27, baseline and follow-up disease activity parameters (BASDAI, BASFI, CRP, ESR, global VAS, swollen and tender joint count). Patients with nr-axSpA were fulfilled ASAS classification criteria for axial SpA without meeting modified New York criteria for AS (1). Patients with psoriasis and inflammatory bowel disease were excluded. If patients took TNFi drugs last 6 months, patient accepted as ongoing TNFi treatment. Kaplan-Meier plots and log rank tests were used to assess drug survival.
Results. There were 630 AS and 102 nr-axSpA patients with TNFi in this database. In nr-axSpA group, 53 of 74 (71.6%) patients had HLA-B27 positivity, and 65 of 68 (95.6%) patients had sacroiliitis in MRI. Sixteen nr-axSpA patients had both HLA-B27 positivity and sacroiliitis in MRI. Mean age in AS and nr-axSpA were 41±11 vs 36±9 years, p<0.001. Mean disease duration in AS and nr-axSpA were 9.7±7.2 vs 4.4±3.1 years, p<0.001. AS patients were more frequently male 415/630 (65.8%) vs 47/102 (46.1%), p<0.001. Mean TNFi duration was higher in AS patients than nr-axSpA 34±31 vs 19±21 months, p<0.001. TNFi drugs in AS and nraxSpA patients were adalimumab (23.1% vs 34.3%), etanercept (38.1% vs 35.3%), infliximab (34.4.% vs 24.5%) and golimumab (4.1% vs 5.9%), p>0.05. Patients with nr-axSpA and AS had similar TNFi switch ratio 26.6% vs 30.3%, p>0.05. Baseline CRP 3.70±7.24 vs 3.31±6.72 mg/dl, p>0.05 BASDAI score 5.6±1.8 vs 5.6±2.0, p>0.05 and BASFI score 4.4±2.6 vs 4.5±2.7, p>0.05 were similar in AS and nr-axSpA patients. However, baseline ESR (33±23 vs 21±20 mm/hour, p<0.001), tender joint counts (0.83±1.34 vs 0.29±0.96, p=0.006), and swollen joint counts (0.63±1.44 vs 0.58±0.27 p<0.001) were higher in nr-axSpA patients. At last visit, ESR (14±15 vs 10±11 mm/hour, p=0.007), CRP (1.28±2.15 vs 0.47±0.77 mg/dl, p=0.002), BASDAI score (2.4±2.0 vs 3.0±2.3 p=0.016), and BASFI score (2.7±2.3 vs 1.9±2.1 p=.0009) were statistically different in AS patients from nr-axSpA patients. Patients with nraxSpA and AS patients had similar TNFi drug survival (log rank 0.65) (Figure 1).
Conclusions. In a randomized controlled trial, Ability-1 study (1), found that clinical activity and functional capacity were similar both AS and nr-axSpA patients. Our biological database confirmed mentioned study that BASDAI and BASFI similarly impaired in both diseases. Besides, we also demonstrated that TNFi drug survival was similar in AS and nr axSpA.

Keywords. Non-radiographic axial spondyloarthritis, ankylosing spondylitis, drug survival.

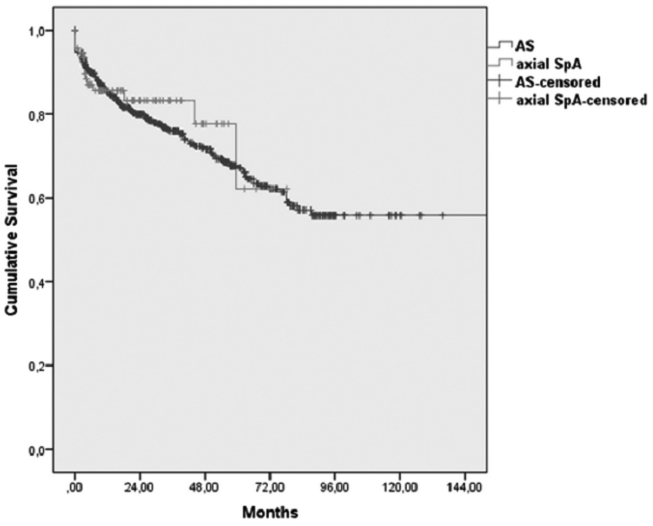

Fig. 1.

P-205

Vitamin D Metabolism in Systemic Sclerosis

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Background. Vitamin D deficiency is widespread and has been associated with many autoimmune diseases, including systemic sclerosis. In scleroderma, vitamin D deficiency was correlated with disease activity or phenotype characteristics such as pulmonary hypertension, lung involvement, extensive cutaneous forms, but little it's known its metabolism and causes of deficiency.
Objectives. to investigate vitamin D metabolism in scleroderma patients and if defects at this level may be associated with disease clinical and paraclinical features.
Methods. Twenty SSc patients and twelve controls were evaluated. Vitamin D status was assessed by measuring 25(OH)D serum levels. The expression of mRNA for vitamin D receptor (VDR), CYP27B1, CYP24A1 in peripheral blood mononuclear cells (PBMCs) was evaluated by realtime PCR.
Results. Subjects were grouped based on serum 25(OH)D level: one group with 25(OH)D level <=20ng/ml (deficiency) and the other with 25(OH)D >20ng/ml level (insufficiency). Scleroderma patients with deficiency had a more active (p=0,002) and severe (p=0,006) disease than those with insufficiency. They also had significantly decreased DLCO levels (p=0,017) Scleroderma patients and controls had similar sera level of 25(OH)D (p=0,647). The VDR mRNA was significantly higher in scleroderma patients than in controls (p=0.014). Scleroderma PBMCs expressed significantly lower levels of CYP27B1 mRNA (p=0.021), but CYP24A1 mRNA was comparable between groups (p=0,449). Vitamin D level was negatively correlated with disease activity, Medsger severity score, diagnosis of pulmonary hypertension, poor quality of life, the presence of osteoporosis; positive correlations were found with DLCO values. The expression level of VDR mRNA in PBMCs was associated with inflammatory markers and impaired lung function.
No correlation was identified in SSc patients PBMCs between vitamin D level, VDR, CYP27B1 and CYP24A1. Only for controls a significant correlation between the expression level of VDR mRNA and CYP24A1 (r=0.673, p=0.033), between VDR mRNA and CYP27B1 mRNAs (r=0.682; p=0.021) and between CYP27B1 and CYP24A1 mRNAs (r=0.891, p=0.001) were identified
Conclusions. Low vitamin D status, increased VDR expression and decreased expression of activating enzyme (CYP27B1) suggest defects in local production and response to active vitamin D. Scleroderma patients with inadequate levels of vitamin D have more active and severe disease (pulmonary hypertension, lung involvement) and poor quality of life. Low levels of 25(OH) associated with decreased CYP27B1 mRNA expression may suggest the use of active vitamin D metabolites for supplementation
Keywords. Systemic sclerosis, vitamin D deficiency, VDR, CYP24A1, CYP27B1.

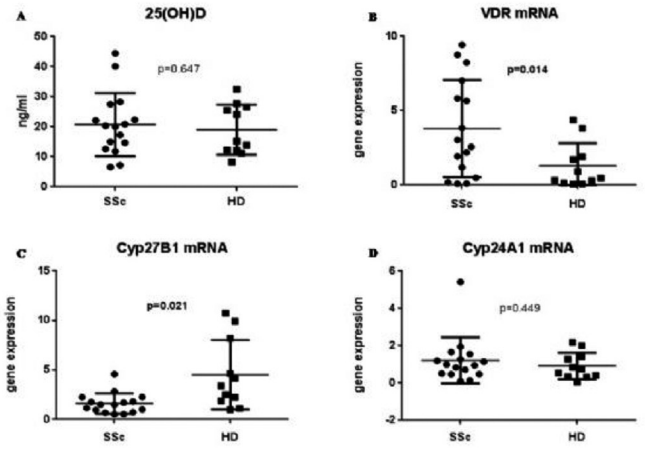

Fig. 1. Comparison of 25(OH)D levels (1A), VDR mRNA expression (1B), CYP27B1 (1C) and CYP24A1 (1D) between scleroderma patients and controls.
SSc patients and controls had similar sera level of 25(OH)D (p=0,647) (Fig. 1A). The VDR mRNA was significantly higher in SSc PBMCs than in controls (p=0.014) (Fig.1B). SSc PBMCs expressed significantly lower levels of CYP27B1 mRNA (Fig. 1C) when compared to controls (p=0.021). CYP24A1 mRNA (Fig. 1D) was comparable between groups (p=0,449). The differences between groups, for each transcript, were statistical evaluated with Student t-test and p-value <0.05 were considered significant,

P-206

Nail fold Capillaroscopic Assessment and Vascular Biomarkers in Systemic Sclerosis: Low CD40L Levels in Patients with Late Scleroderma Patterns

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Objectives. To determine the relationship between vascular biomarkers reflecting the vascular injury and neoangiogenesis with capillaroscopic changes in systemic sclerosis (SSc).
Methods. Seventy-two SSc patients (66 female) fulfilling Leroy and Medsger classification criteria were evaluated, including clinical findings nailfold videocapillaroscopy (NVC) was performed qualitatively (early, active and late scleroderma patterns) in all patients (Cutolo M, et al. J Rheumatol 2000). Serum samples of patients were collected for flow-cytometric analysis of CD40L, tPA, MCP-1, sE-selectin, IL-8, IL-6, VEGF, sP-selectin, TGF-β ve VCAM levels (Bender MedSystems, Vienna, Austria) at the same time with NVC. Results were compared with Pearson chi-square / Fischer's, Mann Withney U ve Kruskal Wallis tests.
Results. The mean age of the patients was 44.9 and disease duration from the appearance of Raynaud's and non-Raynaud symptoms were 5.8±5.9 and 3.2±2.4 years. Of the patients 23(%32) had diffuse and 49(%68)limited cutaneous involvement, 15(%21) were anti-centromere(+) and 34(%47) were anti-Scl70(+). When we compared with healthy subjects; tPA (p=0.02), MCP-1 (p=0.001), sE-selectin (p=0.008) and TGF-β1 (p=0.001) levels were significantly higher, sP-selectin (p=0.011) ve IL-8 (p=0.001) levels were lower in SSc patients. SSc patients grouped according to NVC patterns as 'early'(n=10), 'active'(n=37) and 'late'(n=25). Between groups according to NVC patterns, only sCD40L(pg/ml) levels were significantly lower in the 'late' group (p=0.043), higher in patients with limited cutaneous involvement (p=0.01) and smoking history (n=32,%44) (p=0.033). The other markers were similar between NVC groups.
Conclusions. There were lower sCD40L serum levels in patients with late NVC patterns, although the levels were similar to healthy controls in patients with early, active NVC pattern.CD40L may be a key molecule in the early/active phase of vascular involvement. Higher concentrations of sCD40L in patients with limited cutaneous disease and smoking history might be related to its role in vascular pathology. NVC is a useful method for investigating the vascular pathogenesis in SSc.
Acknowledgement: We thank Actelion Turkey for providing unrestricted support for the study.
Keywords. Systemic sclerosis, nailfold videocapillaroscopy, CD40L.

P-207

Autoimmune Myositis – Histological Features in a Skin and a Muscle Biopsy

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Background. Autoimmune myosites (AIM) are a group of acquired, heterogeneous, systemic diseases, characterized by progressive symmetrical muscle weakness, histological changes in the muscle biopsy, and the presence of autoantibodies (Abs) in the serum of some patients. AIM can be differentiated into three major and distinct subsets: dermatomyositis (DM), polymyositis (PM), inclusion body myositis. DM is a microangiopathy, which characterized by activation and deposition of complement causes lysis of endomysial capillaries and muscle ischaemia. In PM cytotoxic T cells leads to fiber necrosis via the perforin pathway. Skin and muscle biopsy plays an important role in the diagnosis of myositis. But are there significant histological changes between the various diagnostic subgroups?
Objectives. The objectives of the study were to analyze histological changes in a group of patients with myositis and to compare the most common histological features in patients with DM and patients with PM.
Material and Methods. Skin and muscle biopsies were collected from 30 patients (age 47.27 ± 12.01) with a diagnosis of active myositis. Using Bohan&Peter criteria we made a definite diagnosis in all patients. Muscle biopsies were obtained with an open biopsy from the vastus lateralis muscle. Routine stains included haematoxylin-eosin, periodic acid Schiff (PAS), Masson Goldner. The frequency comparisons among two groups were analysed by Chi-square method (Fisher's exact test), SPSS 13.0 for Windows, as p value didn't exceed 0.05.
Results. Skin biopsies: The histological features were found in 67% of cases, as the most common histological changes were: perivascular inflammatory infiltrates, atrophy of the epidermis, epithelial fibrosis and thickened vessels.

Muscle biopsies. Inflammatory cells were presented in 57% of cases. The infiltrates (diffuse or focal) consisted of small mononuclear cells. Other histological changes were found respectively: necrotic fibers – in 50% of muscle biopsies, interstial fibrosis – in 60%, atrophy – 40% of cases. Regeneration of myofibrils occurred in 47% of patients.
The analysis of the biopsy findings in two subgroups (PM and DM) revealed no significant intergroup differences (p>0.05).
Conclusion. Important histopathology differences were described among dermatomyositis and polymyositis. In the study no significant differences were found between two subgroups, using routine stains. Therefore it is necessary to make histomorphometric and immunohistochemical analyses.
Keywords. Autoimmune myositis, skin biopsy, muscle biopsy.

P-208

Scleroderma Capillaroscopic Patterns in Autoimmune Diseases with Raynaud's Phenomenon. Report of 100 Patients

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Benaknoun Hospital Algiers Algeria.

Summary. Nailfold capillarmicroscopy allows to visualize and study the capillaries by simple transillumination.The presence of megacapillaries and a decreased capillary density are the hallmarks of the scleroderma capillary pattern, which can be detected by nailfold capillarmicroscopy.
Objectives. - research the scleroderma capillaroscopic patterns in the various autoimmune diseases with Raynaud's phenomenon. - prevalence of the other nonspecific capillaroscopic anomalies.
Patients and Methods. One hundred patients were investigated: 26 cases with undifferentiated connective tissue disease (UCTD), 20 patients with systemic lupus erythematosus (SLE), 4 patients with dermato/polymyositis, 10 with rheumatoid arthritis, 16 cases with primary Sjögren's syndrome and 24 patients with systemic sclerosis (SSc). Ninety nine of these patients are female, the average age is 40,3 years. These patients were all explored by capillarmicroscopy.
Results. All patients (100%) with dermatomyositis showed the scleroderma capillaroscopic pattern, 70.8% of systemic sclerosis, 42.3% of undifferentiated connective, 30% of lupus disease, 31.2% of Sjögren's syndrome and one case (10%) of patients with rheumatoid arthritis also exhibited the same pattern.
Conclusion. Scleroderma capillaroscopic pattern is often present in systemic sclerosis and dermatomyositis. Furthermore, it has also been described in other autoimmune disease such as Sharp syndrome, patients with Raynaud's phenomenon and UCTD may also exhibit this pattern. Therefore, capillarmicroscopy seems to be a useful tool for the early selection of those patients who are potential candidates for developing scleroderma spectrum disorders.
Keywords. Scleroderma, Capillaroscopy, Raynaud's phenomenon.

P-209

Evaluation of Local Perfusion of Digital Ulcers with Laser Speckle Contrast Analysis in Systemic Sclerosis Patients

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Background. Systemic sclerosis is a rare connective tissue disease characterized by microvascular damage, reduction of peripheral blood perfusion and increased incidence of digital ulcers (DUs) (1,2). DUs occur in 36-58% of patients during the course of the disease, and their management may be local and systemic (3-5).
Objective. The aim of this study was the observation of the evolution of DU, treated for ten days with local medication, by evaluating local blood perfusion (BP) changes by laser speckle contrast analysis (LASCA), a non-contact technique.
Methods. Twenty-two SSc patients with DU of recent onset (mean age 65±11 years, mean disease duration 6±5 years) were enrolled during their normal follow-up. Patients continued their pharmacological treatment (e.g. vasodilator drugs, endothelin receptor antagonists (ERA) and immunosuppressive drugs). Local BP was evaluated in all patients by LASCA before starting local treatment (T0), at the level of the hands (dorsal and palmar surface) (6). After acquisition of whole hand perfusion, different regions of interest (ROIs) were created at the level of fingertips, periungual, ulcer and periulcer areas, and the perfusion values were reported as perfusion units (PU) (6). The ulcers were treated with local hydrocolloid dressing (7). The medications were changed every 2 days. After 10 days of treatment (T1) LASCA was repeated, with the same aforementioned modalities. Statistical analysis was performed by non-parametric tests.
Results. A statistically significant increase in BP was observed from T0 to T1 in the ROIs created at the level of the ulcer area (median 38 vs 59 PU, p<0.0001) (due to the increase of granulation tissue), as well as a significant decrease of BP was observed in the periulcer area (median 109 vs 91 PU, p<0.0001) (due to a decreased inflammatory reaction). A positive correlation was observed between fingertip BP and periungual BP at both T0 (r=0.67, p=0.01) and T1 (r=0.46, p=0.04).
Conclusions. LASCA most likely represents a reliable technique to monitor DU evolution at least in SSc patients, since it seems to offer a quantifiable and safe method to evaluate local blood perfusion of the ulcer area during treatment.
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Keywords. Systemic sclerosis, laser speckle contrast analysis, digital ulcers.

P-210

Evaluation of Dermal Thickness by Three Different Methods in Systemic Sclerosis Patients

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Background. Both, high frequency ultrasounds (US) and plicometer skin test (Plicometry) have been proposed to study skin involvement in SSc patients, while modified Rodnan skin score (mRSS) is the standard outcome measure used to evaluate the severity and extent of skin involvement (1-8).
Objectives. The aim of this study was to identify possible correlations between US, mRSS, and Plicometry during the evaluation of DT in patients with SSc.
Methods. Seventy SSc patients (mean SSc duration 6±5 years, mean age 63±12SD years) and sixty-five healthy subjects (mean age 64±12SD years) were enrolled. The patients were evaluated the same day by the three techniques, during their normal follow-up. The three aforementioned methods (US, mRSS, and Plicometry) were employed to study DT in the seventeen areas of the skin usually evaluated by mRSS (face, fingers, dorsum of hands, forearms, arms, chest, abdomen, thighs, legs and feet) and the total score calculated, as previously reported (1,3,4,8). The three tests were repeated by 2 blind operators to evaluate inter- and intra-observer variability. Statistical evaluation was performed by non-parametric tests.
Results. A significant positive correlation was found between the three methods used to evaluate DT in the SSc patients (mRSS vs US r=0.53, p<0.0001; mRSS vs Plicometry r=0.98, p<0.0001; US vs Plicometry r=0.53, p<0.0001). US showed that SSc patients have a statistically significant higher DT at the level of the studied areas when compared with control subjects (p=0.0001). Both intra- and inter-observer variability were assessed for the three methods. The intraclass correlation coefficients for mRSS was 0.92 for the inter-observer variability and 0.95 for the intra-observer variability, for US 0.95 and 0.97 respectively, and for Plicometry 0.94 and 0.96 respectively. The necessary time to collect the data for mRSS was almost ten minutes, for Plicometry fifteen minutes and for the US was twenty minutes.
Conclusions. This study demonstrates a significant positive correlation between US, mRSS, and Plicometry in DT evaluation in SSc patients.
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Keywords. Dermal thickness, systemic sclerosis, high frequency ultrasounds, plicometer skin test, modified Rodnan skin score (mRSS).

P-211

Health Related Quality of Life in Patients with Systemic Sclerosis and Rheumatoid Arthritis

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Background. Systemic sclerosis (SSc) and rheumatoid arthritis (RA) is a chronic disease associated with impaired health-related quality of life (HR-QOL).
Objectives. The aim of this study was to compare HR-QOL in SSc and RA.
Methods. Fifty-seven patients with SSc, and 48 with RA were recruited from our rheumatology out patient-clinic. Patients were assessed for detailed clinical history and physical examination. HR-QOL and functional limitations were evaluated by Short Form 36 (SF-36) and Nottingham Health Profile (NHP); disability by Health Assessment Questionnaire (HAQ); depression and anxiety risk by the Hospital Anxiety and Depression Scale (HAD) and hand functions by Duruoz Hand Index (DHI).
Results. Mean age of the patients with SSc was 48.8±12.6 years and RA was 48.1±11.1 years (p:0.74). Mean disease duration in SSc and RA was 10.0±8.0 and 10.4±7.5 years respectively (*p*:0.79). The mean diagnostic delay in SSc and RA was 5.2±5.4 and 2.8±3.8 years, respectively and was statistically longer in SSc (*p*:0.009). Mean Rodnan skin sore was 14.2±8.6 in SSc group. In SSc group, there was 25 (43.9%) diffuse cutaneous SSc, 27 (447.4%) limited cutaneous SSc, 3(5.3%) scleroderma sine sclerosis and 2 (3.5%) overlap syndromes. Mean BMI of SSc and RA was 26.0±5.9 and 29.3±5.4, respectively (*p*:0.004). All component scores of SF36, NHP, DHI were similar between patients with SSc and RA, except general health subscores of SF-36, which was higher in RA. Furthermore, HAQ and anxiety and depression scores of HAD were similar in SSc and RA groups. Mean handgrip strength in SSc (17.3±7.1) was relatively lower than RA (18.9±11.1). There was positive correlation between HAQ and age (r:0.27, *p*<0.0001), VAS pain (r:0.48, *p*<0.0001), patient (r:0.49, *p*<0.0001) and physician global assessment score (r:0.47, *p*<0.0001), DHI (r:0.79, *p*<0.0001), component of NHP(r:0.43-0.74, *p*<0.0001), HAD (r:0.42-0.45, *p*<0.0001), Rodnan skin score (r:0.46, *p*:0.001), acute phase reactants (r:-0.25-0.29, *p*:0.013), Medical Research Council dyspnea score (r:0.60, *p*<0.0001) and negative correlation with SF-36 component summary scores (r:0.60-0.72, *p*<0.0001), handgrip strength, educational level (r:-0.20, *p*:0.009).
Conclusions. This study indicates similar impairment in HR-QOL, hand function, and disability, depression and anxiety risks in patients with SSc and RA.
Keywords. Quality of life, systemic sclerosis, rheumatoid arthritis.

P-212

Evaluation of Systemic Sclerosis Patients by Quantitative Sensory Testing for The Presence of Neuropathy

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Background. Neuropathy is a common feature of collagen tissue disorders. Although development of digital ulcerations may be associated with presence of neuropathy, percentage of systemic sclerosis (SSc) patients with documented neuropathy is low. Quantitative sensory testing (QST) has been used to detect and characterize neuropathies.
Objectives. The aim of this study is to evaluate the patients with SSc by using QST for the presence of small and large fiber neuropathies and to investigate the association between digital ulcers and neuropathy.
Methods. We studied 50 SSc patients (46 (92%) were female). Demographic and clinical features of all patients were recorded. Michigan Neuropathy Screening Instrument (MNSI) questionnaire was performed in all subjects. MNSI questionnaire score >=4 was considered to be abnormal. QST was performed using a CASE IV machine (WR Medical Electronics, Stillwater, Minnesota). Vibration and cold detection thresholds were measured using a 4, 2, and 1 stepping algorithm with null stimuli in the left foot and left hand. An increased threshold was defined as >99 percentile.
Results. The mean age and the median disease duration of SSc patients was 47±12 years, 111 (12- 480) months, respectively. Thirty (60%) patients had limited SSc The median modified Rodnan's score of the patients was 7 (3-29). Thirty (60%) patients had digital ulcer history. Ten (20%) patients had >= 4 MNSI questionnaire scores. The abnormal hand and foot vibration-detection thresholds were found in 26 (52%) and 20(40%) patients. The abnormal hand and food cold detection thresholds were found in 3 (6%) and 7(14%) patients. The mean disease duration or the mean hand MRS were not different between patients with or without abnormal QST values for cold or vibration detected thresholds (p NS for all). Number of patients with DU history or SSc type were not different between patients with abnormal QST values for cold or vibration detected thresholds or not (p NS for all).
Conclusions. This study revealed that although there were significant percent of SSc patients who had abnormal cold and vibration threshold values by QST, there were no association of clinical features of SSc with abnormal QST values
Keywords. Quantitative sensory testing, systemic sclerosis, digital ulceration.

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Thrombin Activated Fibrinolysis Inhibitors (TAFI) Levels in Active Diffuse Systemic Sclerosis Patients

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Thrombin-activated fibrinolysis inhibitors (TAFI) is activated by the endothelial surface thrombin and has an important role on the relation of coagulation, fibrinolysis and inflammatory systems. Basically, activation of TAFI downregulates fibrinolysis and also, leads the neutrophil activation triggered by C5 and kinin related inflammatory systems. We aimed to show the relation between the serum TAFI levels and disease activity of diffuse systemic sclerosis patients (SSc).
Method. 13 active SSc female patients with interstitial lung disease and 10 healthy women were involved in to the study. From the serum samples of both groups, TAFI levels were measured by ELISA method using pefakit TAFI (Penthafarm, Basel).
Results. Serum TAFI levels of SSc patients was 63.1±19.1 mg/dL SD(min-max:30-90 mg/dL) and control group's TAFI level was 41.0±11.1mg/dL SD (min-max: 9-59 mg/dL). All data was analysed by Mann-Whitney U test. *p*<0.05 was accepted as significant. Comparison between the scleroderma and control groups TAFI levels revealed that TAFI levels in patient group was significantly higher (*p*=0.009).
Conclusion. Fibrinolytic activity is linked to inflammation. Increased amount of TAFI in serum may explain why fibrin formation is so prominent in SSc. And also TAFI may play important roles in the mechanism of intraalveolar hypofibrinolysis associated with interstitial lung disease.
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Keywords. Thrombin Activated Fibrinolysis Inhibitors (TAFI), Active, Diffuse Systemic Sclerosis.

P-214

Elevated Serum Levels of Calprotectin (Mrp8/14) in Patients with Systemic Sclerosis

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Background. S100A8 and S100A9 belong to the damage-associated molecular pattern molecules. The S100A8/A9 heterodimer is also referred to as calprotectin, it is considered to be a an activator of the innate immune system via Toll-like receptor 4 and is usually released at the site of inflammation and can strengthen the inflammation triggered by endogenous factors via activation of TLR4. Serum level of calprotectin is markedly elevated in various rheumatoid diseases. Systemic sclerosis (SSc) is a generalized connective tissue disorder with various immunological abnormalities. Recently the elevated concentrations of calprotectin was demonstrated in bronchoalveolar lavage fluid of patients with SS.
Objectives. The purpose of this study was to investigate serum level of calprotectin in patients with systemic sclerosis (SS) and its association with disease activity and quality of life.
Methods. Twenty-eight patients who met the American College of Rheumatology 1980 criteria for the classification of scleroderma and thirty-one sex and age matched individuals as healthy controls (HCs) were included into the study. The

skin involvement was assessed using a modified Rodnan Skin Score (mRSS). European Scleroderma Study Group (EScSG) disease activity indices for systemic sclerosis was used to assess disease activity. The quality of life of the subjects was assessed via the short form 36 (SF-36). Laboratory investigations included the erythrocyte sedimentation rate (ESR), C-reactive protein (CRP), complete blood count, routine biochemical analysis and measurements of serum complement (C)3 and C4 levels. Serum calprotectin levels were measured by ELISA.
Results. Serum levels of calprotectin were obtained significantly increased in SS patients compared to HCs (p<0.001) but calprotectin levels were not correlated with ESR, CRP, C3 and C4 levels (p>0.05). We could not demonstrate any correlation between calprotectin levels and mRSS, EScSG disease activity indices and physical and mental component scores of SF 36 (p>0.05).
Conclusions. The possible effects of calprotectin on the etiopathogenesis and prognosis of the patients with SS should be the new searching areas for further studies. New trials with larger sample sizes are needed to elucidate the calprotectin as a potential therapeutic target in this disease.
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Keywords. Calprotectin, systemic sclerosis, disease activity, quality of life.

P-215

Is There a Link with Mucopolysaccharidosis and Systemic Sclerosis

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Background. Mucopolysaccharidoses (MPSs) are a group of metabolic disorders caused by the absence or malfunctioning of lysosomal enzymes needed to the breakdown of glycosaminoglycans (GAGs), an important component of connective tissues. Although the clinical features vary widely, nearly all types of MPSs are linked with thickened skin. In addition to the skin findings musculoskeletal involvement such as joint stiffness and contractures, and a swollen appearance of some joints due to underlying bony enlargement is a common feature in all types. Because of that, MPSs may be confused with inflammatory rheumatic diseases.
Objectives. Since systemic sclerosis (SSc) patients have similarities with MPSs such as the thickened skin, musculoskeletal features, and abnormal accumulation of GAGs (e.g., HS) in the dermis, we wondered whether an abnormality in the enzymes related with MPSs could be the reason for this observation.
Methods. We studied common lysosomal enzymes for MPSs (alpha-iduronidase, arylsulfatase B and beta-galactosidase) in 10 consecutive SSc patients (2 male, 8 female). Dried blood spot was collected from the patients and assays were performed in metabolic laboratory, Hamburg university medical center.
Results. There were 10 patients (M/F=2/8). Median ages and disease duration of the patients were 56.5 (25-72) years and 4 (1-23) years respectively. 5 patients had diffuse cutaneous systemic sclerosis and 5 had limited cutaneous systemic sclerosis subtype. We found that alpha-iduronidase, arylsulfatase B and Beta galactosidase enzyme activities were within normal reference ranges in all patients (Table I).

Table I. Some of the demographic and laboratory findings of patients with systemic sclerosis.

Patient	1	2	3	4	5	6	7	8	9	10
Age (years)	58	42	55	38	49	25	67	65	62	72
Sex	F	F	F	F	F	F	F	M	M	F
Disease type	dc	dc	lc	lc	lc	dc	dc	lc	dc	lc
Disease duration (years)	1	23	1	10	1	1	3	5	5	7
Alpha-iduronidase (fluorometry, reference: 0.04-0.4 nmol/spot*20h)	0.09	0.06	0.06	0.06	0.13					
Alpha-iduronidase (mass spectrometry, reference: 450-2614 nmol/spot*20h)						1156	904	1181	901	614
Arylsulfatase B (reference: 0.14-0.7 nmol/spot*21h)	0.41	0.28	0.2	0.26	0.43	0.34	0.33	0.42	0.29	0.74
Beta galactosidase (reference 0.5-3.2 nmol/spot*21h)	0.65	0.65	0.5	0.81	1.22	0.93	0.77	0.86	0.62	0.61

dcSSc: diffuse cutaneous systemic sclerosis; lcSSc: limited cutaneous systemic sclerosis.

Conclusion. Our results here suggest that common lysosomal enzyme activities for MPSs may not be altered in SSc. Further studies involving larger samples of patients are required to confirm our results.
Keywords. Mucopolysaccharidoses, systemic sclerosis, lysosomal enzymes.

P-216

The Ψ-Reuma Project: Role of Early and Recent Life Events on Systemic Sclerosis (Ssc) Clinical Presentation and Course

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Background. Stressful Life Events (SLEs) may play a role in the etiopathogenesis of autoimmune diseases especially during childhood (early SLEs) and in the year prior to the onset of the disorder itself (recent SLEs). Such a deleterious effect of stressful events seems to be mediated by the inadequate responsiveness to stressors and to chronic inflammation due to a dysregulation of the Hypothalamic-Pituitary-Adrenal axis (HPA axis) No study has addressed the relationship among early and recent SLEs, in patients with Systemic Sclerosis (SSc).
Objective. The aims of the present study were to explore the multiple effects of stress on SSc onset and course, and to evaluate the impact of pain perception and health-related quality of life on patients with SSc.
Method. 110 consecutive SSc patients were enrolled. The assessment included a face-to-face interview and the administration of self-reported questionnaires evaluating pain perception and quality of life (Short Form (36) Health Survey, Brief Pain Inventory, Childhood Experience of Care and Abuse Questionnaire (CECA-Q) and Florence Psychiatric Interview (FPI). Clinical status was assessed by modified Rodnan Skin Score and Raynaud Condition Score, nailfold videocapillaroscopy and instrumental examination of internal organs.
Results. Compared to controls (n=100), a higher proportion of patients reported at least one Stressful Life Events (56.3% vs 34.5%, p<0.01) and presented a worse quality of life and a higher pain perception (all the subscales of Short Form (36) Health Survey and of Brief Pain Inventory were significantly different between the two groups p<0.01). All the specific early life events were more frequently reported by SSc patients, even though a significantly difference was obtained only for "separation from mother" and for "sexual abuse. SSc patients, with a significant clinical worsening (33.6%), reported more frequently the occurrence of severe and dependent recent life events compared to patients without a significant clinical worsening (54.0% vs 26.0% p<0,05).
Conclusion. Early SLEs can be considered potential risk factors for the onset of SSc. The occurrence of recent SLEs may have a role in the course of the disease, being linked to a significant clinical worsening.
Keywords. Stressful life events, systemic sclerosis, pain perception.

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Myopathic Syndrome Due to The Use of Statins and Hyponatremia in A 84-Year-Old Female: A Case Report

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Comparison Between Semiquantitative and Quantitative CT Assessment of Interstitial Lung Disease Related to Systemic Sclerosis

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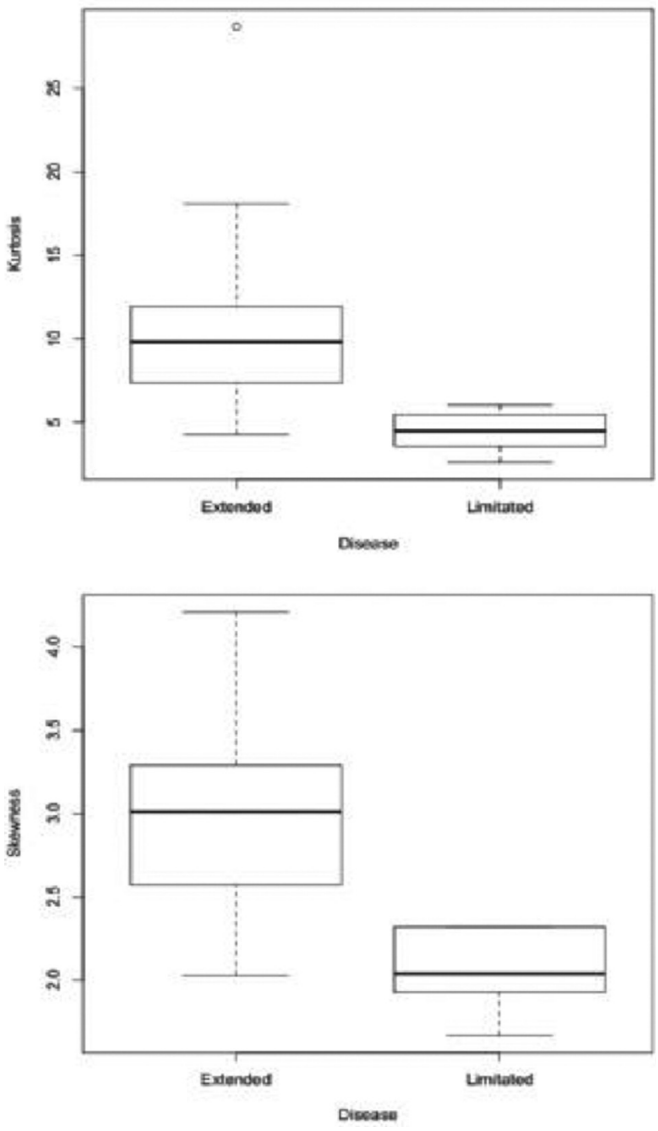
Background. The pulmonary fibrosis extent in systemic sclerosis (SSc) has a prognostic value. Chest Computed Tomography (CT) is the gold standard to detect an interstitial lung disease (ILD). Semi-quantitative scores and quantitative methods can estimate the ILD. The first ones have a considerable inter-intra-observer variability, while quantitative scores, based on distribution of lung attenuation parameters (also called CT indexes), can be obtained through expensive and not so user-friendly software.
Objectives. The aim of this work is to investigate whether a DICOM-viewer open-source software (OsiriX) can obtain CT indexes correlating with semi-quantitative scores.
Methods. 63 chest CTs of ILD-SSc patients were assessed with two semi-quantitative methods (visual extent and limited/extensive ILD grading) and then blindly processed with OsiriX to obtain the distribution parameters of lung attenuation (kurtosis, skewness and mean). Semiquantitative assessment and CT indexes were compared through the Spearman rank test and Mann-Withney test.

Box-plots



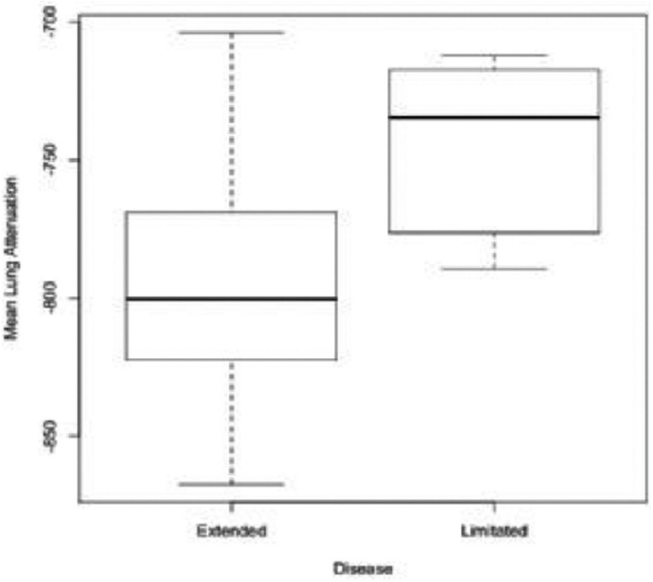


Fig. 1. Box-plots showing difference of kurtosis, skewness and Mean Lung Attenuation distribution between limited and extensive disease patients' groups.

Results. All CT indexes showed a statistically significant correlation of moderate degree with the visual extent semi-quantitative assessment (p-value <0.05). Skewness was the lung attenuation distribution parameter with the strongest correlation (r=-0.378, p-value =0.0023). Moreover CT indexes of patients with an extensive and limited disease were statistically different (p<0.01).
Conclusions. CT indexes correlating with a radiological semi-quantitative ILD assessments can be obtained through OsiriX. CT indexes can be considered very helpful to discriminate patients with extensive and limited ILD.
Keywords. Systemic Sclerosis, OsiriX, Interstitial Lung Disease.

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Investigation of Short-Wave Diathermy Genotoxic Effect in Patients with Knee Osteoarthritis

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[3]Sami Hizmetli;
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Objective. Short-wave diathermy (SWD) is a physical therapy agent, commonly used as deep heater in physical medicine practice. SWD has positive effects on regeneration of the damaged tissue by increasing tissue's oxygen with vascular dilatation and removal of metabolic residual materials. Quite different results arise when it is applied in various doses and durations. It's reported that it increases mutagenesis in high density. The aim of this study was to investigate whether there is a chromosomal damage resulting from therapeutic SWD by using micronucleus method.

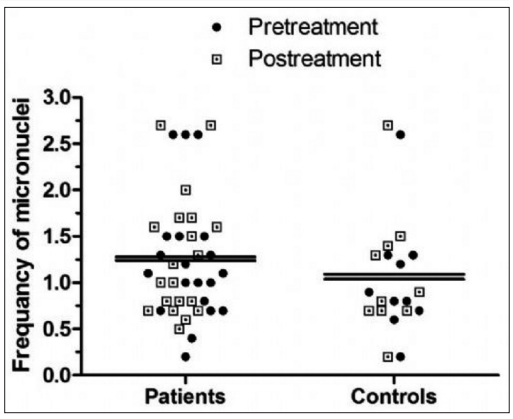

Fig. 1. Pre treatment and post treatment MN frequency of study groups. Dots present the MN frequency of subjects in study groups. Lines present mean MN frequency of study groups, measured as pretreatment ad post treatment. After paired and unpaired comparisons, there were no significant differences.

Methods. In the present study, 30 patients who suffered from knee pain and diagnosed as gonarthrosis with ACR (American College of Rheumatology) criteria were admitted. 20 patients were accepted as treatment group and 10 patients were accepted as control group. The patients of the treatment group received 10 sessions of SWD therapy whereas the patients of the control group received 10 sessions of sham SWD therapy. Peripheral venous blood were taken before and after 10th applications of SWD therapy has been cultured for MN scores both for the treatment and the control groups. The scores of MN assessed before the therapy were compared with end of the 10th session in the treatment group and the control groups. Pretreatment and end of the 10th session MN scores were compared between the treatment and the control group.
Results. As a result there was not any statistically significant difference in MN scores between pretreatment and 10th session, in both group. There was also not any significant difference in the MN scores of the groups between pretreatment and 10th session evaluation.
Conclusion. Consequently, in this study we observed that therapeutic SWD did not induce increasing in MN score which is a sign of cytogenetic damage.
Keywords. Short wave diathermy, micronucleus assay, gonarthrosis.

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Pain in Heels: Piezogenic Pedal Papules

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Piezogenic pedal papules (PPP), which are forms of responses to internal mechanical pressure, appear on the wrists and especially on feet. PPP, which are mostly bilateral and benign, can generally be caused by pressure on the heel and weakness in the connective tissue in the dermis. Although in most of the studies in the literature, Piezogenic papules are generally observed in healthy individuals, sportsmen and especially marathon runners, which leads us to consider PPP as among the frictional and mechanical dermatoses related to sports, our study focuses on two housewives having a completely different life style in comparison to sportsmen/women.
Patient 1. A sixty-two years old female patient was first seen in the dermatology outpatient clinic for intense pain in the both heels of one week duration, aggravated by standing or walking.
Examination revealed no abnormality except for slight obesity (BMI 29). When she was sitting, the heels appeared normal, but when she stood with dispersing the body weight equally to the foot surface, numerous yellowish round papules appeared on the posterior, medial and lateral aspect of both heels, causing moderate pain in both heels
Patient 2. A seventy-three-years old female patient was admitted to our clinic with widespread pain, in the both heels for four month duration, aggravated by standing or walking.
Examination revealed no abnormality except for obesity (BMI 35).When she was sitting, the heels appeared normal, but when she stood with dispersing the body weight equally to the foot surface, numerous yellowish round papules appeared on the posterior, medial and lateral aspect of both heels, causing severe pain in both heels (figure 2a-b).
In both patients, the papules were tender to pressure and differed both in location and in the severity of the pain (VAS score 9) from nodules found in plantar fasciitis. Also, lateral foot x-rays and ultrasonography showed no abnormality in terms of plantar fasciitis.
Two patients were diagnosed with the painful PPP by clinical examination and findings.

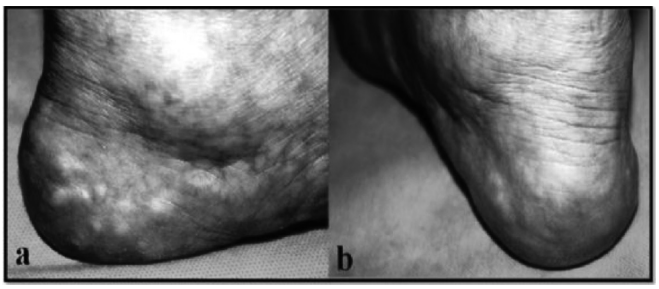

Fig. 1. a, b. Numerous yellowish round papules on the posterior, medial and lateral aspect of both heels.

As a result, one injection of a solution of equal amounts of betamethasone and prilocaine was applied in treatment of pain in both patients. According to the patients' reports, in the clinical evaluation of the patients in the following day, their VAS score were dramatically reduced to 1.
In order to prevent the relapse of the same condition, they were recommended to reduce their body weight, to use heel cups. In their 6-months follow-ups, the patients did not report any clinical complaints considering the PPP and their VAS score remained significantly low. Our conclusion is that painful PPP might be considered in differential diagnosis in old patients with no sports background who complain with heel or foot pain, aggravated by long term standing. PPP can lead to heel pain in almost all age groups and as its diagnosis is easy, it should be kept in mind as a possibility in patients complaining with heel pain.
Keywords. Piezogenic papules, pain in heels, injection.

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Diagnostic Approach of Behçet's Disease in Tajikistan

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Background. Republic of Tajikistan is a mountainous landlocked country in Central Asia, which borders with Afghanistan to the south and China to the east and was a part of the Silk route in past. The rheumatic diseases affection rise in the population of Tajikistan was noticed during the medical statistics data preliminary analysis in 2010. Where, the early Behçet's diseases diagnostics issue was detected as the most problematic area. The evidence of this fact is late acquisition forms of the disease that causes young aged persons disability.
Objectives. Determine the diagnostic approach of Behçet's disease in the population of Tajikistan.
Materials and methods. The study included 25 patients aged 20-40 years (the average age 25.6±7.2), who appealed for the medical aid to the Fifth City Clinical Hospital and the National Medical Center in Dushanbe city with the determined Behçet's diseases. Verification of the diagnosis was carried out according to criteria developed by the International group for the study of Behçet Disease (International Study Group for Behçet's Disease, 1990). Data were evaluated through the general clinical examination methods.
The results of the study. The majority of patients are young age persons: 20-25 years in 76.5% of cases, age 35–40 in 23.5%. From the total amount there are 5 (20%) women, and 20 men (80%) affected. During the disease history taking we found out that the debut of illness was detected in 17-18 years, and in 70% of cases it started from the eye inflammatory processes such as uveitis, conjunctivitis, iridotcyklitis. In 25% of cases the disease began from the nodular erythema and stomatitis were noticed in 65% of cases. More than 80% of patients complied for the combined defeat of the eyes and mouth. Also we observed that the delayed diagnosis of ocular manifestations in the absence of pathogenic therapy led to significant reduction of view, leading to blindness within 2-3 years from the onset of the disease (75%). In case of early diagnostics in 25% of patients sight was saved. It is also worth noting that out of 25 surveyed patients seven received disability group on health.
Conclusion. The biggest challenge of the Behçet's disease in the population of Tajikistan is late diagnosis. As the debut of Behçet's disease has a variety of clinical manifestations that brings to the late diagnosis and the deterioration of the disease prognosis. Late diagnosis is a matter of local doctors' unawareness and patients' late appealing for special assistance as well. Therefore, the development of the interdisciplinary network for the Behçet's diseases early diagnosis and appropriate management should be priority for the population of Tajikistan.
Keywords. Diagnostic Approach, Behçet's Disease, Tajikistan.

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Coexistence of Systemic Sclerosis and Sarcoidosis: A Case Report

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IL-1 and IL-18 Induce NF-ϰB Activation in Monocytes of Severe Behçet Patients

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Background. Behçet disease (BD) is most commonly found in Turkey, Asian and Mediterranean countries. BD is a chronic disease and effects on various organ systems and characteristics of BD are: repeating ulcerations in oral and genital areas, and problems in skin, eyes, vessel and the central nervous system. BD is a multifactorial disease and it thought that environmental, genetic and hormonal factors may be involved in disease. IL-1 and IL-18 from IL-1 family are proinflammatory factors that play important a role in inflammation in Behçet disease through NF-κB pathway.
Objective. The aim of this study was to determine signaling pathways for IL-1 and IL-18 in Behçet disease.
Methods. Monocytes were isolated from severe and milder Behçet patients and these cells were incubated by IL-1 and IL-18 at 37oC for 15 min. The proteins were separated on SDS-PAGE, transferred to nitrocellulose filter and western blot was performed by anti-PNF-κB and normal NF-κB.
Results. Our results showed that IL-1 and IL-18 induce NF-κB activation in monocytes cells from severe Behçet patients. However, NFKB activation was not induced by IL-1 and IL-18 in monocytes from milder Behçet patient.
Conclusions. IL-1 and IL-18 activate NF-κB transcription factor in severe Behçet patients. These results may imply that IL-1 and IL-18 may play important a role for severity of Behçet disease.
Keywords. Behçet disease, IL-1, IL-18, NF-κB signaling.

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Extensive Thrombosis in a Young Man with Factor V Leiden and Behçet's Disease

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Behçet's disease is a rare immune mediated vasculitis with unknown etiology characterized by oral and genital aphthae, cutaneous lesions, and ophthalmic, neurologic, vascular, articular, gastrointestinal manifestations. It involves blood vessels of all sizes, both arteries and veins, by a nonspecific vasculitis. Endothelial activation and altered coagulation generates thrombotic events in 20-25% of patients. Although studies show that thrombophilic factors are not linked to Behçet's, an association of Behçet disease with factor V Leiden could increase the risk of thrombosis in this patients. We present the case of a young male patient who developed an extensive jugular vein and right atrium thrombosis as the first manifestation of an association between Behçet's disease, antiphospholipid syndrome and factor V Leiden mutation. A 23 year old male patient is admitted at an infectious disease hospital with high fever, asthenia, and oral aphthae. Laboratory tests show leukocytosis and increased inflammatory markers (ESR 130 mm/h, CRP positive). Other laboratory tests were negative including microbiological and viral analyses. The patient empirically received antibiotics during which he developed scrotal ulcerations and erythematous papular lesions at venous puncture site. Cardiac echography and thoracic tomography revealed a small floating formation in the right atrium. In order to exclude an infected artrial mixoma, he was referred to cardiovascular surgery department, the intervention revealing and removing an atrial thrombus. One month later, under oral anticoagulation he developed anterior cervical region edema, dysphagia, and odynophagia. Vascular echography showed extensive thrombosis of left internal jugular vein up to the superior vena cava and right atrium. Hematologic tests were: lupus anticoagulant - positive, anti-β2-glycoprotein-I antibodies positive, Factor V Leiden mutation present, normal protein C, protein S, homocystein. Patient received injectable anticoagulation and was referred to Rheumatology. Considering the combination of oral aphthae, genital ulcerations, venous and atrial thrombotic events, Behçet's disease diagnosis was established. Persistency of fever and inflammatory markers assed the need for immunosuppression and the patient received intravenous high dose methylprednisolone (1g/day, 3 days) followed by oral methylprednisolone (maximum 32mg/day), cyclophosphamide (800mg monthly, 13 pulses) followed by azathioprine (100mg/day), hydroxychloroqine (400mg/day), colchicine (1mg/day), and oral anticoagulation. Under this treatment his evolution was good, with complete remission of inflammation, cutaneous lesions and without any other thrombotic event in the last two years since diagnosis. Although thrombophilic factors are not the leading cause of thrombosis in Behçet's patients, we should consider a more complex testing for this category of patients in order to better prevent severe thrombotic complications.
Keywords. Factor V Leiden, Behçet's disease, thrombosis.

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Venous Claudication is a Severe and Frequent Symptom in Behçet's Syndrome

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Background/Purpose. In a previous cross-sectional questionnaire survey, we had shown that intermittent claudication was significantly more common among BS patients when compared to healthy controls, and had proposed that this was a "venous claudication" (1) rather than due to atherosclerotic vascular disease since a. a history of myocardial infarction or angina pectoris were not increased in frequency in the same group of patients as compared to age and sex matched healthy controls; and b. this intermittent claudication was specifically more common among males with venous thrombosis. The so called venous claudication is thought to be an exercise induced pain resulting from venous outflow impairment (1). With this study we aimed to 1. To reassess the frequency of venous claudication by a questionnaire survey and 2. To further study this venous claudication prospectively by a formal treadmill exercise in BS patients with and without venous thrombosis along with healthy controls.
Methods. We studied 59 BS patients with lower extremity venous thrombosis (LEVT), 42 BS patients without venous disease and 55 healthy controls. All patients and controls were male. Patients and controls with peripheral arterial disease were excluded. Intermittent claudication was assessed initially by Rose questionnaire. After this, patients were asked to walk in the treadmill at a set speed of 3.5 km/h and 10% inclination for 10 minutes. Patients who first experienced persistent symptoms consistent with venous claudication but still able to walk and those who had to give up the treadmill were noted. Pre and post-exercise ankle brachial pressure indices (ABPIs) were also measured.
Results. The mean ages of the patients and controls were similar (Table). Pre and post-exercise ABPIs did not differ between patients and controls. There were significantly more patients who described claudication in the questionnaire among those with LEVT (31 %) compared to those with no venous disease (5%) and healthy controls (0 %) (p<0.001) (Table). Similarly, the number of patients who experienced claudication but still continued to walk on the treadmill were significantly more among those with LEVT. Finally, only those with LEVT had to stop the treadmill challenge due to claudication. Pre and post exercise ABPI's were similar among BS patients with LEVT. There was no relation between the presence of vena cava, iliac or femoral vein involvement and the presence of claudication or limitation of walking capacity.
Conclusion. Venous claudication seems to be a severe and frequent symptom being present in up to 1/3 of BS patients with major vein involvement. It clearly limits the walking capacity in 10 % of these patients even when tested in a treadmill set at low pace.
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Keywords: Behçet's Syndrome, Venous Claudication, Venous thrombosis.

Table. Severity and frequency of claudication.

	BS patients with venous thrombosis n=59	BS patients without thrombosis n= 42	Healthy controls n = 55	*p*
Age, mean ± SD, years	37 ± 7	34 ± 7	36 ± 9	0.346
Claudication as assessed by questionnaire, n (%)	18 (31)	2 (5)	0	<0.001
Leg pain during the treadmill exercise (the patient continues to walk) n (%)	10 (17)	3 (7)	1 (2)	0.016
Claudication necessity the termination of the treadmill exercise, n (%)	6 (10)	0	0	0.006

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The Clinical Course of Acute Deep Vein Thrombosis of the Legs in Behçet's Syndrome

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Objective. To determine the prospective clinical course of lower extremity deep vein thrombosis (LEDVT) in patients with Behçet's syndrome (BS).
Methods. Consecutive BS patients with an acute or subacute episode of LEDVT were prospectively studied. Clinical examination and lower extremity doppler ultrasonography (US) were done at 1, 3, 6, 18 and 24 months after the index event. A relapse was defined as a new episode of LEDTV and/or a superficial vein thrombosis (SVT).
Results. 40 patients (6F, 34M) with LEDVT were followed for a mean= 33.2±10.8 months. The mean age was 30.2±7.3, and the median disease duration since disease onset was 33.3 months (IQR=8.0-60.8). A total of 50 relapses were observed in 27 patients. This was in the form of solo SVT in 8 patients, solo LEDVT in 10 and LEDV+SVT in 9 patients. Cox regression analysis revealed that a recanalization rate of >= 50% in LEDVT observed by US at month 3 was significantly associated with a lower relapse rate (HR= 0.23; 95% CI =0.092-0.59). The first line treatment had been with azathioprine (AZA) with moderate dose of glucocorticoids (0.5 mg/kg/d) in 34 (85%) patients, interferon-alpha (IFN-alpha) in 4 and cyclophosphamide in 2 patients (also with pulmonary vasculitis). 19 out of 34 (55%) remained on AZA, 10 were switched to IFN-alpha for resistant or recurrent disease during follow up. 8 of these 10 patients did not experience relapses after switching to IFN-alpha. 16 patients treated with IFN-alpha (including 3/4 initially treated with IFN-alpha) during follow-up and 12 of 16 (75%) patients were still on IFN-alpha therapy without relapses.
Conclusions. Relapses and resistant disease are frequent 27/40 (67.5%) in LEDTV in BS and is significantly associated with a failure to recanalize at 3 months. IFN-alpha seems to be effective in the treatment of LEDVT, refractory to AZA and glucocorticoid use.
Keywords. Behçet's Syndrome, Deep vein thrombosis, Recanalization, Azathioprine, Interferon-alpha.

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Predictors of Quality Of Life in Behçet's Syndrome

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Objective. To determine the factors that impair the quality of life in Behçet's syndrome (BS).
Method. Behçet Disease Quality of Life (BDQoL) and Short- Form 36 (SF-36) questionnaires were filled by consecutive BS patients attending our outpatient clinic. Socioeconomic factors, type of organ involvement during the disease course and during the last 4 weeks, damage caused by each type of organ involvement, treatment modalities and overall disease activity were tested with regression analysis as possible predictors of life quality. Men and women were also analyzed separately.
Results. 322 patients (M/F: 166/156, mean age: 37.9±11.1) were included (157 with eye, 72 vascular, 67 joint, 20 neurologic 2 gastrointestinal and 93 with only mucocutaneous involvement). Predictors of worse BDQoL in the whole group were high disease activity, low household income, work disability, perception of insufficient income, and neurologic damage (R^2:0.47, F:48.76, p<0.001). Among women only, predictors were high disease activity, perception of insufficient income, neurologic and mucocutaneous involvement (R^2:0.40, F:19.75, p<0.001). Among men only, predictors were work disability, high disease activity, low household income, perception of insufficient income, vascular involvement during the last 4 weeks, and neurologic damage (R^2:0.56, F:29.70, p<0.001). SF-36 scores were well correlated with BDQoL scores (r=-0.69 for physical component and r=-0.63 for mental component).
Conclusion. In addition to overall disease activity and neurologic damage, in women mucocutaneous involvement and in men recent vascular events seem to impair quality of life in BS. These findings are important for developing management strategies and outcome measures.

Keywords: Behçet's Syndrome, Quality of Life, Overall disease activity, Vascular involvement, neurologic damage.

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Heat Shock Proten Gene-60 (HSP 60) Polymorphism in Behçet's Disease

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Objective. Behçet's Disease (BD) has the hallmarks of complex genetic disorder. The most established genetic marker-HLA B51 does not account for more than 20% of the relative risk in siblings of affected individuals. Heat shock proteins (HSP) might stimulate both innate and adaptive immune mechanisms in BD. They might be linked to the chemoattraction of inflammatory cells. HSP gene polymorphisms could explain the clinical diversity of the BD.
Methods. Case patients were 110 consecutive Turkish patients with BD, 100 healthy controls and 93 connective tissue disease patients rather than BD (rheumatoid arthritis, n: 29; primer systemic vasculiitis, n:18; ankylosing spondiliitis, n:15; systemic sclerosis, n:11; systemic lupus erythematosus, n:8; primary Raynoud's syndrome, n:7; Sjögren's syndrome, n:3; dermatomyositis, n:1; recurrent oral ulceration, n: 1) were involved in this study. All BD patients and controls were genotyped by polymerase chain reaction for HSP60 polymorphism at codon 136-1 and 2, 178, 244, and 336.
Results. The frequency of GAT/GAA single nucleotide polymorphism in codon 136-2 was found in three BD patients with vascular clinical manifestation, but none of the any subject in control groups (**p**<0.001). Conclusion: Our findings show that GAT/GAA 136-2 polymorphism of HSP60 might be associated the severity of the BD mainly with vascular manifestations susceptibility. But this association is difficult to be accepted as SNP that causes the disease susceptibility or severity.
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Keywords. Behçet's Disease, Heat Shock Protein-60 (HSP-60), Polymorphism.

P-229

Characteristics of Behçet's Syndrome in a Series of Romanian Cases

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Behçet's syndrome is a rare form of systemic vasculitis characterized by recurrent mucocutaneous manifestations and chronic relapsing uveitis, musculoskeletal, neurologic, vascular, and gastrointestinal involvement.
Objective. To analyze the characteristics of Romanian patients with Behçet's syndrome.
Methods. We analyzed the database of patients admitted to our hospital, between April 2013-March 2014 and a retrospective descriptive study was conducted.
Results. The search returned 11 Romanian patients with Behçet's syndrome (7 male and 4 female). The onset of the disease occurred at a mean age of 34.54 years. These patients have presented the following manifestations over the course of the disease: oral ulcers (11 patients), genital ulcers (7 patients), fever (6 patients), pseudofolliculitis (4 patients), uveitis (4 patients), erythema nodosum (3), pathergy reaction (3), CNS involvement (3), papulopustular lesions (2), arthritis (2), superficial thrombophlebitis (2), deep vein thrombosis (2), arterial occlusion (1).
Association with HLA B51 was found in 3 patients, whereas the HLA B27 antigen was present in 2 patients (one of them also associated the presence of the HLA B 51 antigen). Other 2 patients did not have the HLA B51, while the rest where apparently not assessed concerning this aspect.
The current treatment of the patients at the moment of evaluation consisted of glucocorticoids (8 patients), azathioprine (4), colchicine (4), cyclophosphamide (3), hydroxicloroquine (1); 3 patients were under remission and were not following any treatment. The past treatments of the patients in the past were: glucocorticoids (11), colchicine (6), cyclophosphamide (6), azathioprine (5), cyclosporine (3), hydroxicloroquine (2), leflunomide (1), dapsone (1), mycophenolate mophetil (1), clorambucil (1).
Regarding the severity of the syndrome, 8 patients presented mild/moderate forms, and the other 3 had disabling neurological, vascular, and ocular involvement that required intensive treatment.
Discussions. One patient, who presented superior vena cava thrombosis and right

intraauricular thrombus, also had factor V Leiden deficiency, so we cannot conclude if the associated Behçet's syndrome was an additional trigger to the venous thrombosis.
A particularity was found in a patient who accused neurological symptoms before the onset of the hallmark mucocutaneos lesions of the Behçet's syndrome.
A woman was in remission during the last 8 years, after just one year of clinical activity of the disease. At that time, she received 6 pulses of cyclophosphamide, corticotherapy and colchicine.
7 pacients presented severe glucocorticoid adverse reactions: diabetes (1), Cushing's syndrome (2), osteoporosis (2), and cataract (2).
Conclusions. Although Behçet's syndrome is extremely rare in our country, we found a number of cases, protean in manifestations, very demanding in terms of diagnostically endeavors and therapeutical management.
Keywords. Behçet's syndrome, clinical presentation, treatment.

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Cytokine Secretion and Cytotoxic Activity of Natural Killer Cells in Behçet's Disease with Mucocutaneous Involvement

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Background. Behçet's disease (BD) is a multi-system inflammatory disorder with recurrent inflammation attacks.. The main genetic susceptibility is HLA-B*51, but the mechanism is unknown. HLA molecules play a key role with the interaction with natural killer (NK) cells. NK cells are one component of the innate immune system and have to ability to both lyse target cells and serve as regulators of immune responses by releasing Th1, Th2 and Th17 type cytokines.
Objective. In this study we aimed to identify the role of NK cell subsets and cytotoxic activity of NK cells in BD patients with mucocutaneous involvement. Methods. The study group consists of BD patients (n=26) with mucocutaneous involvement and healthy subjects (n=12). The patients have not received any immunosuppressive treatment. Peripheral blood mononuclear cells (PBMC) were used as effector cells and K562 cell line was used as target cell. PBMCs stained with CD107a were incubated with K562 cells with an effector: target (10:1) for four hours. Cells were stained with anti-CD16 antibody for the determination of CD107a expression by flow cytometry. Cytotoxic activity (by using CFSE-labeled K562 as target cells), expression of NK cell receptors and surface markers, intracellular IL-5, IL-10, IL-17 and IFN-γ levels in CD16+ NK cells were also determined by flow cytometry.
Results. Although the percentages of NK, CD16brightCD56dim, CD16dimCD56bright subsets, NKp46 and NKG2D expressions were found similar compare to healthy subjects, decreased CD16dimCD56bright NK cell population but increased NKp46 expression of NK cells was detected in BD who had frequently oral ulcers (p=0.028, p=0.048, respectively). Although IFN-γ secreting NK cells were significantly increased in BD, IL-5+CD16+ NK2, IL-17+CD16+ NK17 cells and NK regulatory cell subset significantly decreased when compare to healthy subjects (p=0.001, p=0.001, p=0.015 and p=0.001, respectively). Elevated IFN-γ secreting NK1 cell subsets and diminished percentages of IL-5 secreting NK2 and IL10 secreting regulatory NK cell subsets was observed in BD patients with frequently oral ulcerations (p=0,013, p=0.031 and p=0.018, respectively). CD107a expression and cytotoxic activity of NK cells did not show any difference between groups.
Conclusions. Although no difference was found in the cytotoxic activity and the degranulation ratio of NK cells, we found a polarization to NK1 cell subset in BD. Our findings revealed that increased NK1 cell subsets might play role in BD pathogenesis.
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Keywords. Behçet's disease, NK cell subsets, cytokines.

P-231

Levels of The Circulating Leukaemia Inhibitory Factor (LIF) in Patients with Vasculitis Under Immunosuppressive Therapy

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Introductıon. Leukaemia inhibitory factor (LIF) is a 38-67-kDa polypeptide originally identified as proliferation inhibitor and differentiation inducer of the Mouse M1 myeloid leukaemia cell line. LIF is a member of the IL-6 family of cytokines. It is one of the key mediators in various inflammatory processes such as acute-phase reaction, tissue damage, and infections. It was shown that serum concentrations of human LIF were higher in patients with inflammatory diseases than the noninflammatory diseases. Elevated concentration of LIF in serum has been associated with the presence of hematologic malignancy (lymphoma). Elevated concentrations of LIF have been correlated with the peripheral white blood cell count in rheumatoid arthritis patients. Isolated trials on vasculitis showed that LIF was considerable elevated in a subgroup of patients with giant cell arteritis.
Aims. In this trial we aimed to evaluate the LIF levels in patients with various vasculitic disorders who were taking immunosuppressive therapy.
Patients and Method. 23 patients with various vasculitic syndromes were included. Seven patients were male (30.4%). Mean age was 43,8±12,9. The distribution of the patients according to the type of the vasculitis: granulamotos polyangitis 3(13%), Churge-Straus 3(13%), systemic lupus vasculitis 5(21.5%), temporal arteritis 1 (4.3%), Takayasu's arteritis 4 (17.4%), polyarteritis nodosa 2 (6.1%), Leukocytoclastic vasculitis 1 (4.3%). Seven patients were taking IV methylprednisolone plus IV cyclophosphamide (CYC), 4 patients were taking oral steroids and IV CYC, 3 patients were taking single agent IV CYC, and 6 patients were taking single agent oral CYC. Two patients were additionally given IV immunoglobulin. Acute phase reactants including ESR, CRP were measured. LIF levels were measured by quantitative sandwich enzyme immunoassay technique by Quantikine human LIF R&D systems (Minneapolis, USA) as pg/L according to the manufacturer instructions.
Results. The median ESR and CRP levels were 7 (min-max: 2-98) mm/hour and 0,5 (0.2-15) mg/dl, respectively. The LIF levels were undetectable in all patients with vasculitis.
Discussion. LIF was previously detected in sera of a group of patients with giant cell arteritis. However, there was no correlation between the levels of circulating LIF and levels of IL-6 or CRP. Levels of LIF were not evaluated in other types of vasculitides. In this study we demonstrated that LIF levels were undetectable in patients with various vasculitic syndromes. All of the patients were taking immunosuppressive therapy. However LIF levels were shown to be not affected by corticosteroid therapy. LIF concentrations were also undetectable in healthy controls. Therefore, this cytokine does not seem to play a role in the pathogenesis of vasculitic disorders. In this report we present undetectable LIF levels in patients with various vasculitis syndromes.
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Keywords. Levels of the circulating leukaemia inhibitory factor (LIF), vasculitis, immunosuppressive therapy.

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Characteristics of ANCA-Associated Vasculitis in A Group of Romanian Patients

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Background. Anti-neutrophil cytoplasmic antibody (ANCA) associated vasculitis (AAV) are a group of rare diseases of unknown aetiology characterised by inflammatory cell infiltration and necrosis of small blood vessels. Three separate diseases are associated with ANCA: granulomatosis with polyangiitis (GPA, former Wegener's), eosinophilic granuloatosis with polyangiitis (EGPA, former Churg - Strauss) and microscopic polyangiitis (MPA).
Objectives. To determine the characteristics of ANCA associated vasculitis in a group of Romanian patients.
Methods. Clinical and laboratory data for 22 patients with ANCA-associated vasculitis admitted at Sfanta Maria Clinical Hospital from Bucharest between January 2011 and January 2014 were obtained using hospital database. All patients had ANCA positivity and histological confirmation. Statistical analysis have been done with Microsoft Excel 2008 SP2 (12.2.3 Build 091001) and SPSS v.20.

Results. 71,43 % (F:M ratio= 1.1:1, medium disease duration 53.7 months) of all patients were diagnosed with GPA, 19,04 % (F:M ratio= 3:1, medium disease duration 34.66 months) with EGPA and 9,53 % (F:M ratio=1:1, 66.2 months) with MPA. Pulmonary involvement was identified in 80% of GPA patients, 75% of EGPA patients and 50% of MPA patients. 66 % of GPA and 50% of both EGPA and MPA patients had renal involvement. 66.66 of GPA patients had ENT involvement. We also find several statistical associations: cutaneous manifestations (palpable purpura) were highly associated with EGPA (r=0.122, *p*=0.036), cANCA (r=0.258, *p*=0.026) and with ENT symptoms (r=1.000, *p*=0.049); fever was associated with pulmonary disease (r=0.489, *p*=0.027).
Conclusion. GPA was the most frequent AAV identified. Pulmonary and renal involvement were the most frequent clinical maniphestations for all AAV. Demographical and clinical features of Romanian patients seem to correlate to other Caucasian patient population, but larger prospective studies are necessary in order to confirm this hypothesis.
Keywords. ANCA associated vasculitis, clinical maniphestations, romanian patients.

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Cervico-thoracic Syndroma revealed by venous thrombosis of the upper limb

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A Case of Granulomatosis with Poliangiitis Without Pulmonary Involvement

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Background. Granulomatosis with poliangiitis (Wegener's) is a complex and potentially serious disease.
Objective. We present the case of a 52 years old male admitted initially in the department of otorhinolaryngology for recurrent crusting sinusitis, nose bleeds and fever. He also complained of fatigue, arthralgia of small joints of the hands, night sweats. The nasal mucosal biopsy revealed areas of necrosis, polymorph inflammation and granuloma. The patient was transferred to the Department of Internal Medicine and Rheumatology. Clinical examination did not reveal significant modification. Laboratory determination revealed leukocytosis 25.000/mm^3, thrombocytosis 577.000/mm^3, ESR=80mm/h, CRP=110mg/l, creatinine=1.9 mg/l urinalysis with proteinuria 2900mg/24h and hematuria, pANCa=75.1 U/L, RF=446 U/L. Evaluation of vasculitides activity: BVAS=31. The patient was treated with antibiotics, cyclophosphamide and metilprednisolone with good clinical and biological response, but with persistence of mild elevation of creatinine level (1.5 mg/l) even after repeated pulses of immunosupression. The particularity of the case is the absence of pulmonary infiltrates at the beginning and in the evolution, but the persistence of mild elevation of creatinine at 6 months and 1 year, indicating incomplete resolution of glomerular involvement.
Keywords. Granulomatosis, poliangiitis, renal involvement.

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Assessment of Takayasu's Arteritis Patients with Indian Takayasu Clinical Activity Score (ITAS2010) Improves with the Incorporation of Imaging

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Objectives. ITAS2010 (Indian Takayasu Clinical Activity Score) is a new composite index developed to assess clinical activity in Takayasu's arteritis (TAK). In this study, we aimed to investigate the validity of ITAS2010 in the routine follow-up of patients with TAK.
Methods. The study included 144 patients (age: 40.9±12.3 years, F/M: 128/16) fulfilling the ACR criteria for TAK from 8 centers in Turkey. ITAS2010 forms were filled in routine visits prospectively, with intervals of at least 4-6 months, by including only new or worsening symptoms within the past 3 months. ITAS-A (ITAS-ESR/CRP) was calculated combining ITAS2010 with acute phase reactants (APR). Clinical activity was assessed with Physician's global assessment (PGA) and Kerr *et al*. criteria.
Results. In the study group, 129 (44.6%) visits were categorized as active according to PGA, 68 (23.5%) according to ITAS2010. ITAS2010, ITAS-ESR and ITAS-CRP were all significantly higher in active patients. The total agreement between ITAS2010 and PGA was 66.4%, between ITAS2010 and Kerr *et al*. was 82.8%. When APR were added, total agreement between ITAS-A and PGA did not improve (67.1%), however, ITAS-A correlated better with Kerr *et al*. (86.3%). During the follow-up, 15 of 43 patients showed vascular progression with imaging. Most patients showing vascular progression were categorized as inactive according to ITAS2010.
Conclusion. ITAS2010 seems to be a practical assessment tool, taking only a few minutes to fill in daily practice. Both ITAS2010 and ITAS-A have a discriminatory values for active disease. However, better association of PGA with imaging suggests that ITAS2010/ITAS-A would be more valuable if combined with imaging.
Keywords. Takayasu's Arteritis, activity, ITAS2010.

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Atherogenic Index as A Predictor of Atherosclerosis in Subjects with Familial Mediterranean Fever

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Background and Objectives. Familial Mediterranean Fever (FMF) which is an autoinflammatory disorder characterized by brief recurrent attacks of pleuritis, peritonitis, arthritis and fever. Recent studies have shown that subclinical inflammation may continue in FMF cases, even in symptom-free periods. Numerous inflammatory and innate immune pathways are involved in atherogenesis. We aimed to investigate the atherogenic index (in recent years increasingly important) and other lipid parameters in individuals with Familial Mediterranean Fever (FMF), as a predictor of atherosclerosis.
Material and Methods. 60 FMF patients and 36 healthy controls were included. We excluded patients with acute infection, chronic metabolic and rheumatic disease, use of drugs other than colchicine and smoking history. Total cholesterol, LDL-C, triglycerides (TG), and HDL-C levels of patients and the control group were measured. Atherogenic index (TG / HDL-C) was calculated. We included 60 patients and 36 healthy subjects who were similar in terms of age and sex.
Results. We found that the atherogenic index values of the patients were significantly higher than those of the control group. HDL-C levels were lower and TG levels were higher in patients. Total cholesterol and LDL-C levels did not differ significantly between the two groups. There was no significant difference in the values of total cholesterol, LDL-C, triglycerides (TG), HDL-C and atherogenic

indexes between the groups of patients with and without M694V mutation.
Conclusion. Elaboration of clinical models of inflammation-induced atherogenesis may further advance our knowledge of multiple inflammatory pathways implicated in atherogenesis and provide a useful tool for cardiovascular prevention. We believe that the atherogenic index also be used as a preliminary indication of accelerated atherosclerosis in FMF. however, large-scale prospective studies on this issue are needed.
Keywords. Familial Mediterranean fever, inflammation, atherogenic index, atherosclerosis.

Table I. All the characteristics and the laboratory data of the groups.

Variables	FMF group (n=60)	Control group (n=36)	*p*
Age (year)	30,15 ±6,67	29,06 ±5,23	0.49
Female, n (%)	33 (55)	25 (69,44)	0.16
TC (mg/dl)	162,72 ±44,56	154,79±20,08	0.88
LDL-C (mg/dl)	97,24±31,62	91,11±17,94	0.72
TG (mg/dl)	117,64 ±59,55	79,82±13,47	0.003
HDL-C (mg/dl)	43,69±14,97	46,75±7,66	0.01
Atherogenic index	3,15 ±2,38	1,74 ±0,38	0.005

Student's t test and Mann–Whitney U test was used. TC: Total cholesterol; LDL-C: low density lipoprotein cholesterol; HDL-C: high density lipoprotein cholesterol; Atherogenic index: (TG / HDL-C).

Table II. Genetic structure of the FMF patients.

Mutations	Mutation type	Number (%)
No mutation	_	3 (5)
Homozygous	M694V	7 (11,6)
	M680I	2 (3,3)
	E148Q	1 (1,6)
	R202with M694V heterozygous	1 (1,6)
Heterozygous	M694V	7 (11,6)
	E148Q	7 (11,6)
	V726A	5 (8,3)
	A744S	1 (1,6)
	M680I	1 (1,6)
	K695R	1 (1,6)
Compound heterozygous	M694V/E148Q	5 (8,3)
	M694V/R761H	4 (6,6)
	M694V/M680I	4 (6,6)
	M694V/V726A	4 (6,6)
	M694V/M694I	4 (6,6)
	E148Q/P369S	2 (3,3)
	M694V/R202Q	1 (1,6)

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Serum Bone Markers Levels and Bone Mineral Density in Familial Mediterranean Fever

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Familial Mediterranean fever (FMF) with recurrent episodes of major peritoneal, pleural and autosomal recessive inheritance of the joints are kept is a disease. FMF changes with attacks and does not require long-term immobilization which may make osteoporosis, newly there have been several publications reporting that subclinical inflammation goes on also between the attacks. Twenty-seven attack-free patients with FMF diagnosed according to the Tel Hashomer criteria were consecutively recruited from the outpatient rheumatology clinics between May 2013 and August 2013. In this study, we searched whether there is a difference between the patients with FMF and healthy controls regarding lumbar and femur bone mineral density (BMD), their standard deviation scores (Z score and T score) and bone markers. There was no statistically significant difference between patient and control groups regarding median values of lumbar BMD (p=0.21), lumbar T (p=0.098) and Z (p=0.109) scores, femoral neck BMD (p=0.194), femoral T (p=0.523) and Z (p=0.358) scores and total femur BMD (p=0.369), T (p=0.788) and Z (p=0.902) scores. 25-OH vitamin D levels of patients with FMF were within low limits, the median value was lower than that of the control group (p<0.001). We found that the bone loss of patients with FMF is not different from that of the controls. As bone markers, deoksiprinidoline, osteocalcin, alkaline phosphatase, there was no difference in terms. But the 25-OH vit D was significantly lower than the control group were found in patients with FMF. For the case of osteoporosis in patients with FMF is a consensus could not be established. To clarify this matter further randomized controlled trials should be performed.
Keywords. Bone Mineral Density, Familial Mediterranean Fever, Serum Bone Markers Levels.

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Evaluation of Thyroid Function in Children with Familial Mediterranean Fever

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Background. Familial Mediterranean fever (FMF) is the most frequent hereditary autoinflammatory disease, characterized by recurrent self-limited attacks of fever and polyserositis. The development of renal amyloidosis type AA is the most devastating manifestation of the disease. Apart from major target organs as renal, cardiovascular, respiratory and gastrointestinal system, endocrine organs can also be involved. Yet, it is unclear how FMF affects thyroid function in patients that are not complicated with amyloidosis.
Objectives. The aim of this study was to evaluate the thyroid function in children with FMF that are not complicated with amyloidosis.
Methods. A cross-sectional study was carried out in pediatric rheumatology outpatient clinics. The medical records of patients with FMF were reviewed. Demographic characteristics, disease duration, mutation analysis, clinical findings, erythrocyte sedimentation rate, C-reactive protein, free T3, free T4, TSH were all noted at attack free periods.
Results. A total of 82 children, 42 girls (51.2 %), with a mean age of 7.76±3.76 years at diagnosis and disease duration 22.31 ± 24.42 months, were included. Twenty one (25.6%) patients were found to have parental consanguinity and 31 (37.8%) patients had family history of FMF. Twelve (14.6%) patients were homozygous, 25 (30.5%) patients were compound heterozygous and 34 (41.5%) patients were heterozygous for MEFV gene. Eleven (13.4%) patients had complex allele mutations (>=3 mutations). Colchicine treatment was started in all patients. The dosage of colchicine needed to control the disease symptoms was 0.95±0.31 mg/day. The mean serum free T3, free T4 and TSH levels of patients were 3.96± 0.54 pg/ml, 1.15±0.15 ng/ml, and 2.53± 2.25 micU/ml, respectively. Hypothyroidism requiring levothyroxine treatment was found in 2 patients (2.43%) at the time of the study and one patient was found to have subclinical hypothyroidism.
Conclusion. Although an association of hypothyroidism and FMF has been reported before we did not find an increase prevalence of thyroid function abnormalities in children with FMF who are not complicated with amyloidosis. Our results suggest that thyroid function tests don't need to be screened routinely in FMF patients.
Keywords. Familial Mediterranean Fever, thyroid function, amyloidosis.

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A Case of Rhabdomyolysis and Myopathy Secondary to Use of Clarithromycin with Colchicine Treatment in Patients with Familial Mediterranean Fever

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Clinical Characteristics and NLRP3 Expression and Function in Cretan Patients with Familial Mediterranean Fever (FMF): A Single Center Experience

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Background. FMF is an autoinflammatory disorder characterized by recurrent self-limited inflammatory episodes. It is an autosomal recessive disease and the responsible gene (MEFV) encodes for the pyrin protein. Pyrin is expressed in innate immune cells and interacts with caspase-1 and other NLRP3-inflammasome components to regulate maturation of interleukin (IL)-1β, which seems to have a major role in FMF pathogenesis.
Objectives. To report on the clinical manifestations, genotyping variation and to assess the expression and function of NALP3-inflammasome in a cohort of FMF patients followed at the University Hospital of Crete.
Methods: During 2005-2013, 160 patients were evaluated for possible FMF. The diagnosis was established according to clinical judgment and genetic analysis for the 12 most frequent MEFV mutations ("FMF Strip Assay"). The clinical, laboratory and genetic characteristics of FMF patients were reviewed. Intracellular NALP3-inflammasome expression (NLRP3, caspase-1, IL-1β) was assessed by Western blotting in peripheral blood white blood cells (WBCs) from symptoms-free FMF patients (n=20) and healthy individuals (n=21), both at baseline and after sequential LPS/ATP treatment for optimal NLRP3 activation. Secreted IL-1β was quantified in cell culture supernatants by ELISA.
Results. 106 patients (50% women) were diagnosed with FMF with an average age 23.5 years (range 1-60) at the time of first attack. Combined MEFV heterozygosity and homozygosity was found in 31.1% of the patients, while 19.9% of patients carried no mutation. The most frequent presenting manifestations were abdominal pain and fever (Table I). 13% of patients require colchicine >1 mg/day to prevent attacks. Only one patient has been started on IL1-blockade (anakinra) due to colchicine failure. Amyloidosis developed in 2 patients. There were no differences in clinical manifestations, response to treatment or expression and function of NALP3-inflammasome among patients with one, two, or no MEFV mutations. Lower NLRP3 and active caspase-1 expression was found in total WBCs from FMF patients compared to healthy individuals. Likewise, LPS/ATP stimulation induced caspase-1-dependent IL-1β release at significantly lower amounts in the FMF group (1182 ± 192 versus 2134 ± 245 pg/ml in controls, p=0.004).
Conclusions. In a cohort of Cretan FMF patients, the most frequent MEFV mutation was M694V and all but two patients had excellent prognosis on colchicine therapy. Genotype did not correlate with clinical manifestations or response to treatment. FMF WBCs demonstrate reduced NLRP3 expression and NLRP3-mediated IL-1β production.

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Keywords. FMF, clinical characteristics, NLRP3 expression and function.

Table I.

Clinical manifestations	Patients (N=107)
Fever	83 (78%)
Abdominal pain	95 (89,6%)
Pleural pain/ pleuritis	31 (29%)
Pericarditis	5 (4,6%)
Arthritis	17 (16%)
Rash	4 (3,7%)
Abdominal surgery / Laparotomy	29 (27%) /5 (4,7%)
Crisis duration	2.92 days (1-7)
Crisis frequency	14/year (3-52)

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Unraveling The Puzzle of Auto-Inflammation in Familial Mediterranean Fever: Implication of Pyrin in Survival Through Regulation of Innate Immune Responses and Autophagy

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Background. Mutations in MEFV gene encoding pyrin (1) account for Familial Mediterranean fever, a recessively inherited disease with yet unsolved etiopathogenic mechanisms (2).
Objectives. To elucidate the pathophysiology of the disease, through the identification of novel genes and miRNAs that interact with or regulate MEFV.
Methods. Silencing of MEFV gene was performed in THP-1 cells that express endogenous pyrin. Global changes in microRNA expression were assessed by GeneChip miRNA3.0 Array and putative target genes were identified using algorithms TargetScan and PicTar. Functional classifications and biological processes of differentially expressed miRNA target genes were assigned according to DAVID 6.7. Finally, miRNA target genetic or protein interactions were constructed using Cytoscape 3.0.2.
Results. We achieved 62% knockdown of the MEFV mRNA following siRNA-mediated knockdown of the respective gene. Global transcriptome analysis revealed 25 deregulated miRNAs involved in inflammatory-mediated responses, cell cycle, cytoskeleton/microtubule dynamics, intracellular trafficking and survival. Specifically, the expression levels of miR-4520a corroborate the role of pyrin in the regulation of inflammatory responses through TLR-mediated signaling. Interestingly, miR-4520a is also shown to target genes implicated in autophagy through regulation of Rheb/mTOR signaling and of Suppressor of IKBKE (SIKE1), involved in autophagosome-lysosome fusion and autophagosome maturation, respectively. Bioinformatic analyses predicted high cooperativity within the significantly deregulated miRNAs, with miR-4520a and miR-4801 targeting genes involved in the same signaling pathway, such as the actin cytoskeleton polymerization through deregulation of PSTPIP1 dephosphorylation, the main interactor of pyrin.
Conclusions. These findings reiterate the involvement of pyrin in innate immune responses and suggest a potential role in survival, cell motility and adhesion probably through regulation of autophagy and cytoskeleton dynamics. Validation of this data in monocytes and neutrophils from FMF patients is in progress.

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Keywords. Familial Mediterranean Fever, pathogenesis, microRNA,; target genes gene silencing.

P-242

Tumor Necrosis Factor (TNF-α) Inhibitor Therapy for Idiopathic Weber Christian Panniculitis: Case Report

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P-243

A Novel Recessive 15-Hydroxyprostaglandin Dehydrogenase Mutation in a Family with Primary Hypertrophic Osteoarthropathy

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Abstract. We present two PHO siblings having a novel homozygous truncating mutation in HPGD. The purpose of the study was to attempt medical treatment, and to find the HPGD mutation causing the disease, in a 22-year old Turkish male and his 23-year old sister afflicted with primary hypertrophic osteoarthropathy (PHO). In combination with NSAIDs and colchicine, treatment with sulfasalazine was started in both cases, and methotrexate was added to the treatment regimen of the female patient at the end of the first year. The patients were found to be typical PHO. Ultrasonographic examination of the joints revealed synovitis and inflammation by B mode and power Doppler ultrasonography. Joint symptoms responded to sulfasalazine treatment in both patients. However, after the addition of methotrexate, the female patient had better remission. All exons of HPGD, the known disease gene, were analyzed by Sanger sequencing. A homozygous 2-bp deletion (c.310_311delCT or p.L104AfsX3) was identified. Seven relatives carrying the mutation in the heterozygous state were examined and none was found affected. Although not specific for this disease, skin, soft tissue and joint ultrasonography can be helpful for evaluation of the musculoskeletal findings in the patients.
Keywords. Clubbing, HPGD, Pachydermoperiostosis, Primary hypertrophic osteoarthropathy, 15-hydroxyprostaglandin dehydrogenase.

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Togetherness of Sarcoidosis and Sjogren's Syndrome in a Patient Presented with Erythema Nodosum

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A.S.I.A. (Autoimmune/Inflammatory Syndrome Induced by Adjuvants) After Rabies immunization

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Cervical Vertebral Fracture Related to Lymphoma

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Introduction. Primary bone lymphoma is characterized by a solitary bone lesion. It is a rare tumor (about 3% of all primary bone tumors). A single cervical vertebral lesion is among the possible presentation.
Observation.
A 68 year old man presented with 6 months history of severe mechanical cervicalgia without any irradiation, he lost 10 Kg in 3 months, without fever, the C3 vertebra was tender to palpation and the range of cervical motion was decreased in neurological examination. Blood tests showed 7000 Lc/mm^3, the C-reactive protein level was 70, normal serum Ca^{+2}, and normal serum protein electrophoresis profile. Blood cultures were negative, quatiferon TB gold test and Rose Bengale test were negative for brucella. Rx of cervical spine showed a wedge fracture of the vertebral body of C3.
MRI of the cervical spine showed a lesion in C3 generating low signal on T1 weighted images and high signal on T2 weighted images with involvement of the epidural sac. A fine needle biopsy established the diagnosis of diffuse large B-cell lymphoma. The patient was treated with chemotherapy and radiotherapy.
Keywords. Lymphoma, bone, cervicalgia.

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Metabolic Syndrome in Children with Juvenile Rheumatoid Arthritis

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The purpose of research - to identify components of the metabolic syndrome in children with juvenile idiopathic arthritis (JIA).
Methods. We examined 86 children with JIA - 54 children with oligoarticular JIA, 21 children with polyarticular JIA and 11 children with systemic JIA. Most of the patients received glucocorticosteroids (GCS) along with basic therapy. 20 healthy children were examined as a statistical control. We used general clinical research methods, including a complex of functional, instrumental and laboratory diagnostic tests. Lipid and carbohydrate metabolism were determined by standard methods. Statistical analysis was performed using the STATISTICA 6.0.
Results and discussion. Abdominal obesity was found in 27.7% of children with oligoarticular JIA, 38.1% of children with polyarticular JIA and 54.5% with systemic JIA. Increased blood pressure (BP) found 20.3% of children with oligoarticular JIA, 28.5% of children with polyarticular JIA and 45.4% with systemic JIA by BP-monitoring results. At the same time there was a significant increase in the index time hypertension and insufficient degree of nocturnal BP reduction. Hyperglycemia or impaired glucose tolerance during a glucose-tolerance test were detected in 14.8% of children with oligoarticular JIA, in 33.3% of children with polyarticular JIA and 36.4% with systemic JIA. Accumulation of adipose tissue, especially abdominal, promotes hyperinsulinemia. Insulin resistance index was increased in 12.9% of children with oligoarticular JIA, 28.5% of children with polyarticular JIA and 27.3% with systemic JIA. A significant increase in total lipid ($p<0.01$), triglycerides ($p<0.001$), as well as reducing the content of high density lipoprotein ($p<0.05$) were detected in children with JIA when compared with the control group. A direct correlation was established between the level of lipids in the blood serum and disease duration ($rs = 0.3$; $p<0.05$), between disease activity and total lipid content ($rs = 0.3$; $p<0.05$) and high density lipoproteins ($rs = 0.4$; $p<0.01$).
Conclusions. GCS-therapy and high disease activity contribute to the development of metabolic syndrome in the majority of children with juvenile idiopathic arthritis.
Keywords. Juvenile idiopathic arthritis, metabolic syndrome, children, abdominal obesity, hyperglycemia.

P-248

Long-Term Impact of Juvenile Idiopathic Arthritis in the Greek Adults' Psychosocial Life

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Background. Juvenile idiopathic arthritis (JIA) seems to have a negative impact on patients' life style mostly due to the disease chronicity. No relevant data have been published for Greek young adults so far. **Objective:** To capture the impact of disease burden in the psychosocial profile of adults with JIA, 17.2 years after disease onset.
Methods. A total of 96 (66 females) patients were enrolled. Psychosocial distress was assessed by the Greek version of the self-completed paper-based General Health Questionnaire (GHQ-28). A second questionnaire regarding marital status, education level and employment status was completed by all patients. Disease activity status at the last follow-up visit was assessed according to the Wallace's criteria while the level of disease activity by the Disease Activity Score-28 (DAS-28). The patient's assessment of global disease activity was measured on a Visual Analogue Scale (VAS) 0 to 10. Structural damage was scored by the Juvenile Arthritis Damage Index-Articular (JADI-A) and by the Total modified Sharp/van der Heijde Score (TmSvdHS). Physical ability was assessed by the Health Assessment Questionnaire-Disability Index (HAQ-DI).
Results. The GHQ-28 case score depicted impaired psychosocial status in 18 patients (18.7%). The level of psychosocial distress was significantly correlated with DAS28 at the last follow up visit (r=0.446, $p<0.001$). The presence of disease activity was correlated with higher degree of depression ($p=0.032$) and social dysfunction ($p=0.008$). Interestingly, patients without or with mild physical disability (HAQ-DI=0-0.49) differed from those with moderate-to-severe disability (HAQ-DI=0.5-3) in the fields of somatization ($p=0.004$) and social dysfunction ($p<0.001$), but not of depression. Higher degree of depression was recorded in the unemployed patients ($p=0.018$) and in those with mandatory education ($p=0.018$). In contrast, structural damage (JADI-A, TmSvdHS), marital status and current use or duration of corticosteroid treatment didn't find to influence patients' psychosocial profile. Global disease activity rated by the patient was found to be the only significant predictor of psychosocial distress in the multivariate analysis [B=0.057 95%CI (0.017, 0.097), $p=0.005$].
Conclusions. Psychosocial distress is evident in a considerable proportion of the patients (~19%), indicating a constant impact of the disease on every-day life. The tight control of disease activity is therefore crucial in order to prevent symptoms of depression in these JIA adults.
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Keywords. Juvenile idiopathic arthritis, GHQ28, psychosocial, long-term outcome.

P-249

Clinical Remission off Medication in Greek Adults with Juvenile Idiopathic Arthritis During a 17 Year Follow-Up Period

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Background. Clinical remission off medication (CR) in patients with Juvenile idiopathic arthritis (JIA) is the optimal aim of treat -to -target strategies.
Objective. To assess the achievement of CR and identify CR's predictors in a cohort of adults with JIA over a long-term disease course.
Methods. Patients >18 years with established JIA, disease duration of >5 years, who are being followed-up in our center, were enrolled in this cohort study. All patients had a clinical, laboratory and radiographic assessment at the time of evaluation. Radiographic damage was based on total modified Sharp/van der Heijde score (TmSvdHS), articular and extra-articular damage on Juvenile Arthritis Damage Index (JADI) and physical ability on Health Assessment Questionnaire (HAQ-DI). The cumulative % time spent in a state of CR- according to Wallace criteria- over the entire disease course was the outcome variable. The candidate predictors were disease characteristics at onset and duration of active disease within the first 5 years of onset.
Results. 98 patients (69 females) were enrolled. Age at disease onset (mean ±SD) was 7.8±4.1 years, the interval from onset to last visit 17.1±6.5 years and the patients' current age 24.9±5.8 years. The type of JIA was systemic arthritis in 11.2%, persistent oligoarthritis in 8.2%, extended in 22.4%, polyarthritis RF negative in 19.4%, RF positive in 11.2%, psoriatic in 9.2%, enthesitis-related arthritis in 18.4% and unclassified arthritis in 2 (2%) patients. Overall, 37/98 patients (37.8%) achieved CR at least once during their follow-up period, and 21.6% of them, at least twice. The initial episode of CR lasted significantly longer than the second one (50.3 vs 22.5 months). The proportions of patients who attained CR, were clearly different among the 7 subtypes ($p=0.008$), the worst being patients with polyarthritis RF positive (0%) and the best, patients with persistent oligoarthritis (87.5%). In 51.4% of the patients CR lasted for >=5 years. Gender, age at disease onset, ANA and anti-CCP positivity were not correlated with attainment of CR. The cumulative % time (mean± SD) in a CR state over the entire disease course was 17.8%± 28.7% (median 0%). The higher % time spent in a state of CR was significantly correlated with lower JADI-A (r=-267, $p=0.008$), JADI-E (r=-348, $p<0.001$), TmSvdHS (r=-0.313, $p=0.002$) and HAQ-DI (r=-239, $p=0.018$) at the last follow-up visit. Predictors of lower % time spent in a CR state were polyarticular subtype [B=-19.099, $p=0.004$] and longer duration of disease activity within the first 5 years [B=-0.667, $p=0.001$].
Conclusion. Shrinking of disease activity periods in long-term JIA induced by improved treatments lead to extended periods of CR and avoid structural damage and physical disability.
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Keywords. Juvenile Idiopathic Arthritis, clinical remission, long-term outcome.

P-250

Association of Neuron-Specific Enolase with Sleep Quality, Cognitive Function And Quality of Life in Patients with Fibromyalgia Syndrome

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Background. Fibromyalgia syndrome (FMS) is a common chronic pain condition characterized by chronic widespread pain and associated signs include fatigue, morning stiffness, non-restorative sleep, mood disturbance, depression, irritable bowel syndrome, and headache. Neuron-specific enolase(NSE) is a protein located in nerve cells and detectable in body fluids as a marker enzyme indicative of nerve cell injury.
Objective. We aimed to investigate whether NSE change in FMS, and also to detect its' relation with sleep quality, cognitive function and quality of life.
Methods. This study carried out on 55 women with FMS and age matched 40 healthy controls. Serum NSE levels measured and sleep disturbance evaluated by Pitsburg sleep quality index, cognitive function evaluated by mini mental test and clock drawing test, and quality of life assessed by Fibromyalgia impact questionnaire and sort form (SF)-36 scales.
Results. Neuron-specific enolase was not changed between groups. While sleep quality, cognitive function and quality of life scores were differed between groups, their relations with NSE was not found.
Conclusion. Neuron-specific enolase, does not seem to change in FMS. In spite of affection of sleep, cognitive function and quality of life in FMS, they do not seem to relate with NSE.
Keywords. Fibromyalgia syndrome, neuron-specific enolase, sleep quality, cognitive function, quality of life.

P-251

Assessment of Mitochondrial Functions and Occurrence of Oxidative Stress at Fibromyalgia Patients

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Objectives. The aim of this study is to investigate mitochondrial functions and occurrence of oxidative stress at fibromyalgia patients.
Study Design. Thirty five patients with fibromyalgia syndrome (FM) and 35 healthy controls were included. Socio-demographic characteristics of participants, accompanying symptoms and number of tender points (TP) of the patients were recorded. The functional status was assessed by Fibromyalgia Impact Questionnaire (FIQ). The oxidative stress status was evaluated by measuring Malondialdehid (MDA) and Superoxide dismutase (SOD) levels, and mitochondrial dysfunction was evaluated by Co-enzyme Q10 (CoQ10) levels of blood samples.
Results. CoQ10 levels were significantly lower in FM patients (Z=-2,30, *p*=0,021). There were no significant difference in SOD and MDA levels between FM and control groups (*p*>0,05). In addition, no statistical correlation were found between blood biochemical parameters and clinical and functional parameters.
Conclusion. According to our results, there is mitochondrial dysfunction in FM patients. But in our study we couldn't demonstrate oxidative stress in FM group. The failure at energy systems of cells may contribute at FM etiopathogenesis.
Keywords. Fibromyalgia, oxidative stress, mitochondrial dysfunction.

Table. SOD, MDA ve CoQ levels.

parameters	FM group	control group
SOD	1005,09	1015,01
MDA	2,13	2,05
CoQ	38,03*	72,25*

*: Z=-2,30, *p*=0,021.

P-252

Assessment of Serum S100 Protein Levels in Patients with Fibromyalgia

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Background. Fibromyalgia (FM) is a form of rheumatism characterized widespread musculoskeletal pain. One of the hypotheses about the pathophysiology of FM is immunological mechanisms. Cognitive and behavioral impairments are core manifestations of fibromyalgia and may be more disabling than pain. There are currently no clinically effective biomarkers that detect cognitive and behavioral disturbances in fibromyalgia. S100 proteins are multifunctional proteins with a regulatory role in a variety of cellular processes. The most studied member, protein S100B, has been investigated as a marker of cognitive impairment and depression in various clinical pathologies.
Objectives. We aimed to investigate the serum levels of S100 protein in patients with FM and its association with cognitive functions, functional and psychological status and quality of life in FM patients.
Materials and Methods. Fifty patients who met the 1990 ACR criteria for the classification of FM and forty healthy controls (HCs) were enrolled to the study. Serum S100 levels were measured by ELISA. The Fibromyalgia Impact Questionnaire (FIQ) was used to assess the functional status. Short-Form Health Survey (SF-36) was used to assess quality of life. Beck Depression Inventory (BDI) and State-Trait Anxiety Inventory (STAI) to assess depression and anxiety respectively. Mini mental test and clock drawing test were used to assess cognitive functions.
Results. Mean serum level of S100 was not significantly different in patients with FM compared to HCs (*p*=0.459). The scores of SF 36, BDI, STAI I-II, FIQ were significantly higher in FM patients (*p*<0.001). Serum S100 levels were not correlated with the scores of SF 36, STAI I-II, BDI, FIQ, mini mental test and clock drawing test (*p*>0.05). S100 levels were correlated with the weights of individuals (*p*=0.039, r=0.292).
Conclusions. S100 proteins have pivotal roles in many rheumatological diseases but we could not demonstrate their roles in FM. S100 proteins were suggested to be a marker indicating cognitive dysfunctions in many clinical pathologies. The underlying mechanisms that cause cognitive dysfunctions in these clinical conditions are probably different from the causative mechanisms of cognitive dysfunctions in FM patients. Further studies are needed for illuminating the pathogenetic mechanisms of FM.
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Keywords. Fibromyalgia, S100 protein, functional status, psychological status, quality of life.

P-253

Effects of Physical Therapy and Balneotherapy on Serum Cortisol Levels in Patients with Fibromyalgia

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[5]Ali Çetin.

Objectives. We investigated the effect of three-week intensive balneotherapy (BT) course and physical agents on plasma cortisol levels and clinical manifestations including FIQ score and algometry in patients with fibromyalgia (FS).
Design. This study included 90 female patients and 30 healthy women. First group included 60 patients, second group included 30 patients, and third group included 30 healthy women. Pain, fatigue, morning stiffness, sleep disturbance, number of tender points, the degree of sensitivity, and functional status were assessed. Treatment program for the first group was applied for five days a week, and for three weeks, and included a total of 15 episodes of 20 minutes of hot pack, 20 minutes of TENS at 50-100 frequency, 6 minutes of ultrasound at 1 MHz frequency and 1.5 w/cm2 dose, and daily 20 minutes of BT and exercise program. Second group took the same program without BT.
Results. Study groups were found comparable with regard to the age and duration of the diseases. Differences of the pain, fatigue, morning stiffness, number of tender points and degree of sensitivity, FIQ, and BDI scores between two patient groups before the treatment were not statistically significant (*p*>0.05), but statistically significant after the treatment (*p*<0.05). When the cortisol levels of the groups were compared, it was found that both of the patient groups had cortisol levels lower than the control group (*p*<0.05), but the difference between

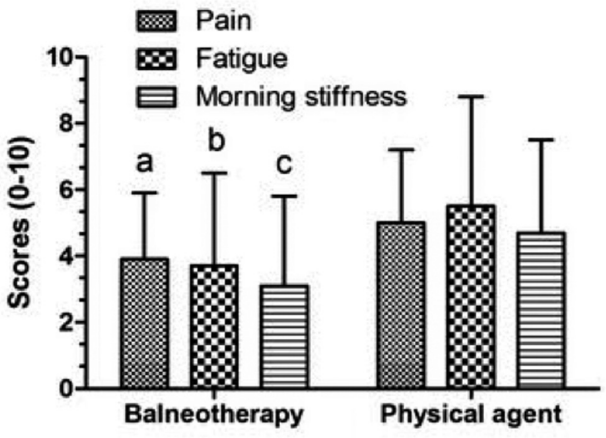

Fig. 1. presents the pain, fatigue, and morning stiffness scores of balneotherapy and physical agent groups. The pain, fatigue, and morning stiffness scores of balneotherapy group were significantly lower than those of the physical agent group (*p*<0.05).

the groups was not statistically significant ($p>0.05$). The correlations between the serum cortisol levels and pain, fatigue, morning stiffness, tender point counts, degree of sensitivity, FIQ, and BDI scores in Group 1 and 2 were low and statistically not significant ($p>0.05$).
Conclusion. We found that BT is effective in patients with FS, and although it is not statistically significant, serum levels of cortisol increases in these patients.
Keywords. Fibromyalgia syndrome, balneotherapy, serum cortisol levels, physical therapy.

Table I.

parameter	Balneotherapy group (n=60)	Physical agent group (n=30)	Control groups (n=30)
cortisol levels	12.8±4.1	13.3±3.8	13.6±3.6

Table I presents the cortisol levels of balneotherapy, physical agent, and control groups. Although the cortisol level of balneotherapy group were lower than those of the physical agent and control groups (12.8±4.1 vs. 13.3±3.8 and 13.6±3.6, respectively), the cortisol levels of study groups were found comparable ($p>0.05$).When the correlations between the serum cortisol levels and pain, fatigue, morning stiffness, tender point counts, degree of sensitivity, FIQ, and BDI scores were analyzed in the balneotherapy and physical agent groups, no significant correlations was found ($p>0.05$ for all).

P-254

Contribution of Partners on Clinical Presentation of FS Cases

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Objective. It has been known that mood disorders play a significant role in the onset and development of the disease and that FMS cases have characteristics, which are generally introverted, unable to reflect emotional needs, lacking self-esteem, inefficient in social relationships. Some measure can be used which have been developed in order to understand the emotional relation between the patient and their first-degree relatives, and to evaluate some features of this relation. Level of expressed emotion (LEE) and expressed emotion scale (EES) are among these measurements According to our knowledge, there was no study investigating the interaction of perception of patients about their disease with the behavior of first degree relatives related to lifestyle changes caused by FS. The aim of this study was to evaluate whether the EE of first-degree relatives of patients affects the perception of patients about their disease and to assess the LEE as perceived from FS patients.
Methods. During the study period, 140 consecutive patients who clinically meet ACR's FS diagnosis criteria and 105 female pain-free volunteers were identified suitable for the study. In the FS group and controls, 17 patients and 15 control subjects, respectively, were not completed the study. Analyses of data were performed with 123 patients and 105 control subjects in the FS group and controls, respectively.
Results. The EE score of FS group was significantly higher than that of the controls (14.2±4.2 vs. 12.4±4.2; $p<0.05$). The median LEE score of FS group was significantly higher than that of the controls [15 (2-56) vs. 11 (3-38); $p<0.05$). The median subscores of LEE including emotional and tolerance subscores of FS group was significantly higher than that of the controls ($p<0.05$). The other subscores were not different significantly between the study group. The GLM analysis to determine the main effect of LEE score showed significant interactions with the independent factors including Madras, EE, and FIQ scores and education level ($F2,079 = 298.65$ $p<0.05$). There was a significant but mild positive correlation between the Madras, EE, and FIQ scores with LEE score (r=0.2, r=0.2, and r=0.2, respectively; $p<0.05$).
Conclusion. In summary, according to results of the study, the unfavorable behavior of first-degree relatives with regard to the lifestyle changes related to symptoms of FS worsens the perception of patient about their disease. To improve the psychological function of FS patients, knowledge about the role of first-degree relatives may provide an important advantage and increase the success of management of FS.
Keywords. Fibromyalgia, Level of expressed emotion, expressed emotion scale, partner.

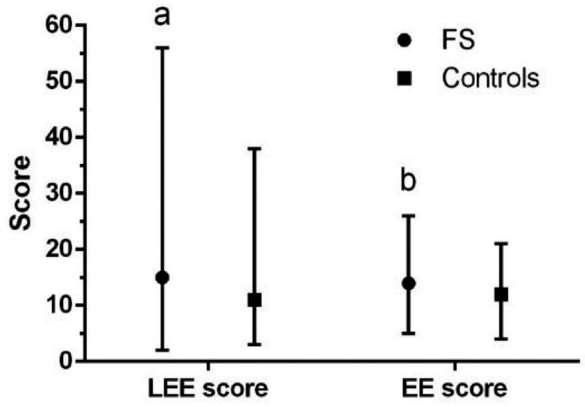

Fig. 1. The EE score of FS group was significantly higher than that of the controls (14.2±4.2 vs. 12.4±4.2; $p<0.05$) (Figure 1). The median LEE score of FS group was significantly higher than that of the controls [15 (2-56) vs. 11 (3-38); $p<0.05$] (Figure 1). The median subscores of LEE including emotional and tolerance subscores of FS group was significantly higher than that of the controls ($p<0.05$). The other subscores were not different significantly between the study group ($p>0.05$).

P-255

Assessment of Effectiveness of Balneotherapy and Physical Agents in Fibromyalgia Syndrome

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The aim of this study is to assess effectiveness of balneotherapy (BT) and physical therapy (PT) in the treatment of fibromyalgia syndrome.
Fifty patients with fibromyalgia syndrome were included. Patients were divided into two groups. First group (n=30) received PT (TENS, ultrasound, hotpack), BT along with the medical treatment for 3 weeks. Second group (n=20) received PT and medical therapy combination. Visual Analogue Scale (VAS) for pain, tender point count (TPC), Nottingham Health Profile (NHP) as quality of life measure and Fibromyalgia Impact Questionnaire (FIQ) to evaluate the functional status was assessed before and after the treatment protocol in both groups.
In both groups there was significant improvement in VAS (first group $p=0.001$, second group $p=0.001$), TPC (first group $p=0.001$, second group=0.002), NHP (first group p=0.001, second group $p=0.001$) and FIQ scores (first group $p=0.001$, second group $p=0.001$) after 15 treatment sessions. But when 2 groups were compared for these parameters after the treatment, there was no significant difference between two groups ($p=0.617$ for VAS, $p=0.231$ for TPC, $p=0.596$ for NSP, $p=0.828$ for FIQ).
According to our results both PT and PT-BT combination along with the standard medical therapy are effective in improving the quality of life, functional status and pain in fibromyalgia. Adding BT to the treatment protocol did not have significant effect on these parameters.
Keywords. Fibromyalgia, balneotherapy, physical therapy.

P-256

Cross-Cultural Validation of The Osteoarthritis Quality of Life Scale (Oaqol) for Six European Countries

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Objective. To validate the Osteoarthritis Quality of Life Scale (OAQoL) across 6 European countries - Germany, France, Hungary, Italy, Spain and Turkey.
Methods. After adaptation of the OAQoL into six languages, data were collected from a minimum of 120 osteoarthritis patients at each centre. This data included demographic and disease characteristics, pain severity, Western Ontario and McMaster Universities Index of Osteoarthritis (WOMAC 3.0 Likert version) and Health Assessment Questionnaire (HAQ). Reliability was tested by internal consistency, test-retest reliability and the Person Separation Index. Internal construct validity was tested through Rasch analysis and cross-cultural validity by Differential Item Functioning. External construct validity was investigated by known group validity and convergent validity.
Results. Eight hundred patients with a mean age of 65.3 years (SD 11.7), and mean disease duration of 11.2 years were included. Reliability of the OAQoL was high with Cronbach's α >0.937, PSI 0.81-0.90 and test-retest reliability 0.87-0.98 in all countries. Fit of the OAQoL data to the Rasch model was good in all countries. There was no differential item functioning by age, gender, disease duration. Some cultural variability was observed when the data from all countries were pooled. This was easily accommodated within the Rasch measurement framework. External construct validity was confirmed by expected correlations with comparator scales and strong associations with all known groups.
Conclusions. OAQoL has been found to be reliable and cross-culturally valid for these six countries. Transformation to the metric is available to facilitate international pooling and comparison of data as well as parametric analysis.
Keywords. Osteoarthritis, quality of life, validity, cross-cultural, reliability.

P-257

Comparative Efficacy and Safety of Diclofenac Versus Naproxen in Pain Relief: Results of A Systematic Literature Review and Network Meta-Analysis

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Background. There have been recent concerns for potential cardiovascular (CV) risks with non-steroidal anti-inflammatory drugs (NSAIDs). It is important to analyze the benefits and risks of NSAIDs while making clinical decisions.
Objectives. To assess relative efficacy and safety of diclofenac in comparison with naproxen using network meta-analysis in adults with osteoarthritis (OA) and rheumatoid arthritis (RA).
Methods. Systematic literature search for randomized controlled trials (published to June 5, 2013) evaluating efficacy and safety of diclofenac, ibuprofen, naproxen, celecoxib and etoricoxib was performed using Medline, Embase, and Cochrane databases. Of 5674 identified citations, 177 publications (efficacy:105; safety:164) met the inclusion criteria. Relative treatment effects between interventions were estimated by Bayesian network meta-analysis. Efficacy endpoints - pain, physical function and patient global assessments (PGA) evaluated at 6 and 12 weeks using Visual Analogue Scale (VAS) and Likert scales. Safety endpoints - APTC (Antiplatelet Trialists' Collaboration), major CV, major gastrointestinal (GI) events, and withdrawals. This abstract presents results for diclofenac efficacy and safety compared to naproxen
Results. Pain relief from diclofenac was similar or likely to be favorable compared to naproxen at 6 and 12 weeks. Diclofenac 150 mg/day was likely to be favorable for pain VAS change from baseline compared to naproxen 1000 mg/day; diclofenac 100 mg/day was similar to naproxen 1000 mg/day at 6 and 12 weeks. Diclofenac was more efficacious or similar compared to naproxen for pain Likert change from baseline (Table). For physical function, limited data on diclofenac was available; diclofenac was similar or likely to be unfavorable compared to naproxen with VAS, and likely to be favorable with Likert at 6 and 12 weeks. For PGA, diclofenac was likely to be favorable compared to naproxen with VAS at 6 and 12 weeks, and similar to naproxen with Likert at 6 weeks. Compared to naproxen, diclofenac was associated with similar risk for major CV events (Rate ratio (RR): 1.0 [0.5,2.1]; probability diclofenac being a better treatment P(better)=50%), APTC events (RR: 1.1 [0.5,2.4]; P(better)=41%), but with a reduced risk for GI events (RR: 0.2 [0.1,0.6]; P(better)>99%). Patients treated with diclofenac had a similar probability of withdrawal due to all causes (RR: 1.0 [0.8,1.1]; P(better)=64%) and adverse events (RR: 1.1 [0.9,1.3]; P(better)=28%), but was likely to be associated with lower probability of withdrawal due to lack of efficacy compared to naproxen (RR: 0.9 [0.7,1.1]; P(better)=90%).
Conclusions. In OA and RA, pain relief from diclofenac 150 mg/day was likely to be favorable compared to naproxen1000 mg/day and pain relief from diclofenac 100 mg/day was comparable to naproxen 1000 mg/day. Diclofenac was associated with similar risk for major CV events but reduced risk for GI events, compared to naproxen.
Keywords. Diclofenac, naproxen, systematic review, network meta-analysis, non-steroidal anti-inflammatory drugs, osteoarthritis, pain, rheumatoid arthritis.

Table. Treatment-difference in change from baseline VAS and Likert scales at 6 and 12 weeks (diclofenac 100 mg or 150 mg/day versus naproxen 1000 mg/day).

Efficacy outcomes	VAS change from baseline (95% CrI; P(better))	Likert change from baseline (95% CrI; P(better))
Pain relief	6 weeks: Diclofenac 150 mg/day: -3.4 mm (-7.0, 0.0; 97%) Diclofenac 100 mg/day: 0.4 mm (-4.4, 5.2; 44%)	6 weeks: Diclofenac 150 mg/day: 0.1 mm (-0.8, 1.1; 39%) Diclofenac 100 mg/day; N/A*
	12 weeks: Diclofenac 150 mg/day: -3.3 mm (-8.6, 1.8; 90%) Diclofenac 100 mg/day: 0.7 mm (-3.8, 4.9; 38%)	12 weeks: Diclofenac 150 mg/day: N/A* Diclofenac 100 mg/day: -1.1 mm (-2.0, -0.2; 99%)
Physical function	6 weeks Diclofenac 150 mg/day: 2.8 mm (-1.7, 7.4; 11%) Diclofenac 100 mg/day: -5.6 mm (-15.5, 4.3; 87%)	6 weeks: Diclofenac 150 mg/day: -3.2 mm (-6.2, -0.2; 98%) Diclofenac 100 mg/day: N/A*
	12 weeks: Diclofenac 150 mg/day: 6.0 mm (-2.2, 14.1; 8%) Diclofenac 100 mg/day: N/A*	12 weeks: Diclofenac 150 mg/day: N/A* Diclofenac 100 mg/day: -3.7 mm (-7.2, 0.0; 97%)
Patient global assessment	6 weeks: Diclofenac 150 mg/day: -6.3 mm (-17.1, 4.4; 88%) Diclofenac 100 mg/day: -10.0 mm (-21.9, 1.8; 95%)	6 weeks: Diclofenac 150 mg/day: -0.1 mm (-0.5, 0.4; 67%) Diclofenac 100 mg/day: N/A*
	12 weeks: Diclofenac 150 mg/day: N/A* Diclofenac 100 mg/day: -4.7 mm (-11.9, 2.7; 90%)	12 weeks: N/A*

*Diclofenac is not in the network for these outcomes Negative values indicate an improvement in the outcome indicating diclofenac is better than naproxen CrI: Credible intervals; N/A: Data not available; VAS: Visual analogue scale.

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Effects of Short- Wave Diathermy on Insulin-Like Growth Factor-1, Insulin and C Peptide Levels in Patients with Knee Osteoarthritis

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m. Short-wave diathermy (SWD) is one of the oldest forms of electrotherapeutic modalities traditionally used by physical therapists to treat symptoms of knee osteoarthritis. In this study, our aim was to show the effects of SWD on IGF-1, insulin and C-peptide in knee osteoarthritis (OA) pathogenesis.
Methods. In our study, 80 patients who suffered from knee pain and diagnosed as primary knee OA according to American College of Radiology (ACR) criteria were admitted. Patients were divided into 2 equal groups. First group get SWD therapy, second group get only same medical therapy; hot-pack and Transcutaneous Electrical Nerve Stimulation (TENS as same as the first group. Blood samples of all patients were taken before and after treatment at 7:00 am. Insulin

levels were assessed daily with electrochemiluminescencimmunoassay (ECLIA) method. IGF-1 and C-peptide levels were assessed by Radio Immuno Assay (RIA) method twice a week.
Results. In the first group which were treated with SWD; there was statistically significant difference grading pre and post treatment IGF-1 levels (p<005). But in the second group there was no statistically significant difference (p>005). Also in both groups, IGF-1, insulin and C-peptide levels didn't show any statistically significant difference, before and after treatment (p>005).
Conclusions. In this study we showed that SWD with many other therapeutically effects, can increase serum IGF-1 levels and may help regeneration of cartilage
Keywords. Osteoarthritis, short-wave diathermy, IGF-1, Insulin, C-peptide.

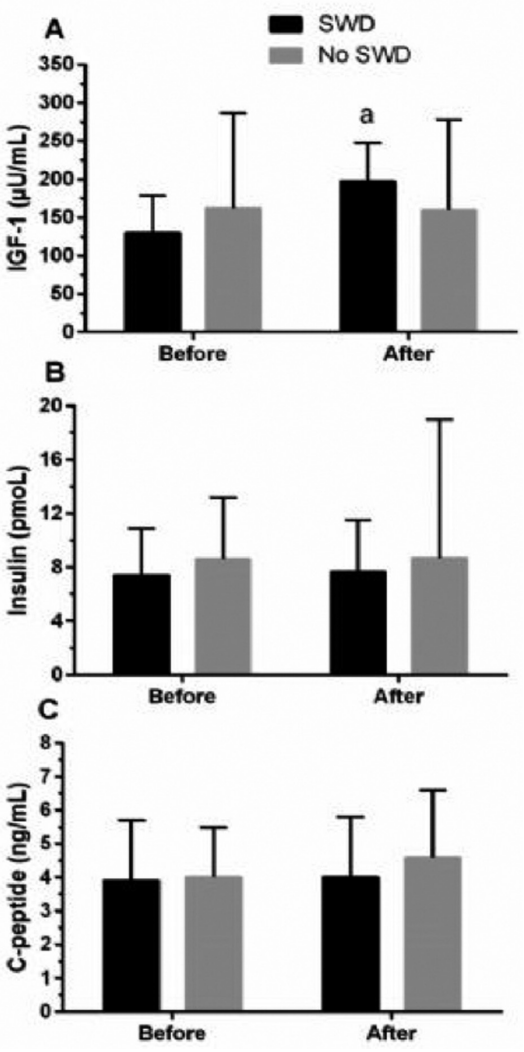

Fig. 1. Presents the IGF-1, insulin, C–peptide levels of SWD and no SWD groups before and after treatment. In the SWD group, the IGF-1 value after treatment was significantly higher than that before treatment (p<0.05). In the no SWD group, the IGF-1 level was comparable before after treatment (p>0.05).The insulin and C–peptide levels were comparable in both SWD and no SWD groups before and after treatment (p>0.05).

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Exercise Therapy for Osteoarthritis of the Knee: Two Years Follow Up

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Background. Knee osteoarthritis (OA) is a painful condition causing disability and handicap. Treatment of knee OA consists of a combination of non-pharmacological and pharmacological approaches. Non-pharmacological approaches include orthoses, exercise, diet and patient education. Even if exercise therapy is a key treatment modality in OA, the optimal content of this treatment has yet to be precisely described.
Aim. The aim of this prospective study was to assess the effectiveness of an exercise therapy program among osteoarthritis knee sufferers.
Methods. This study was carried out on patients having consulted in our rehabilitation department from September 2010 to December 2011 and included 146 patients aged more than 45 years. All subjects received advice and information for the practice of specific exercises at home. Exercise therapy was explained to patients to improve adherence to treatment. Patients were assessed before treatment, after treatment and at each 3 month follow-up. Outcome measures included visual analogue scale VAS pain on walking, VAS pain at rest, range of motion, Western Ontario and Master University Index WOMAC and LEQUESNE index.
Findings. The mean final outcome measurements were taken after 24 month of follow-up. The average VAS score for pain at rest dropped from 68±10 to 31±30. The score for pain during effort fell from 85±13 to 40±30. In 82% of cases, joint mobility was better at the final assessment. There was a significant decrease of number of unplanned medical consultations. Functional scores were improved. 65% of patients were satisfied. However, functional improvement correlated well with adherence to exercise therapy.
Conclusion. Even when it is done at home unattended, unsupervised and without expensive equipment, self management program may be beneficial for pain and function.
Keywords. Knee Osteoarthritis, Exercise Therapy, Self management, Outcome.

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Osteoarthritis Place in Rheumatic Diseases Hospitalization Structure

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Background. The article includes information about long term, two phased research work on osteoarthritis, where the disease specifics were studied on the hospital level in the Republic of Tajikistan.
Aim of the research. to determine osteoarthritis place in the rheumatic diseases hospitalization structure, with further cardio metabolic risk factors revelation in these patients.
Materials and methods. The research was conducted in two phases. During the first phase retrospective analyses of 4716 medical histories of patients with rheumatic diseases hospitalized during the years 2005 – 2010 in National medical Center were studied and osteoarthritis place in the structure of rheumatic diseases on the hospital level was identified. On the next phase the cohort of patients with osteoarthritis was selected from the total number of previously hospitalized patients. The cohort included 60 patients who were mutually observed during three following years, until 2012.
Results. Osteoarthritis have taken the second place in the structure of rheumatic diseases by number of registered patients – 1243 (26,4%), on the other side it was seen more often in older patients with average age – 56,1±7,9 years. As people of the oldest ages mostly are affected with cardio metabolic disorders, therefore, the osteoarthritis specific role in cardiovascular pathologies development was studied. Risk factors for cardio-metabolic disbalance in this patients were detected where the predominate role along with age was given to the cholesterol level rise in 75% of cases, arterial hypertension in 56,6% and obesity in 61,6% of patients.
Conclusion. Considering the complexity of cardiovascular disorders in the cohort group of patients, the coronary risk factors assessment was conducted, where indicators of osteoarthritis inflammation and severity is correlating with the coronary risks sum number. As a matter of fact articular syndrome can be a fact of cardio-metabolic disorders development in patients with osteoarthritis.
Keywords. Rheumatic disease, osteoarthritis, cardiovascular risk factors, metabolic syndrome, ischemic heart disease.

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A Very Low Prevalence of Hip Osteoarthritis in Algeria

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Background. Osteoarthritis (OA) is very common in Algeria; however, epidemiological data on this disease remains scarce. Prevalence of OA differs according to the used definition, either radiographic or clinical. Only symptomatic OA is a real public health problem.
Objectives. To estimate the prevalence of symptomatic OA in rheumatology outpatients, according to the affected joint sites.
Methods. A prospective observational study that took place between January and April 2013, conducted in 7 hospital-based and private practice centers. Consecutive patients over 18 years, presenting for an established diagnosis of osteoarthritis were included. For each site, osteoarthritis was confirmed by clinical and radiological criteria. Data were collected and centralized at the University Hospital of Constantine. All statistical analyzes were performed using an SPSS 20 software.
Results. Five hundred people were included, among them 387 women (77.6%). Symptomatic Osteoarthritis was the most common reason for rheumatology consultation; its frequency was estimated at 46% of the total number of outpatients. Prevalence according to the involved sites was 32.2% for knee OA, 17% for OA of the lumbar spine, 16.6% for OA of the cervical spine and 7.6% for hand OA. However, Hip osteoarthritis was present in only 6 (1.2%) patients. The overall knee/hip ratio OA was 27 (95%CI: 13 - 58), and according to the sex, the knee/hip ratio was 13 (95%CI: 4 - 46) in men and 35 (95%CI: 14 - 86) in women. If we compare our results to the KOHALA study (which aimed to describe the prevalence of osteoarthritis of the knee and hip in the French general population), the knee/hip ratio was 2.4 in men and 2.6 in women. In other studies conducted in other western countries, the proportion was around 2 knee OA for 1 hip OA.
Conclusions. This multicenter prospective study reveals the very low prevalence of hip OA vs knee OA in eastern Algeria when compared with western reports, Further studies are being conducted to try to explain the rarity of knee OA in Algeria.
Keywords. Hip Osteoarthritis, prevalence, Algeria.

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Bisphosphonate Drug Holiday from Patient Perspective – Beliefs and Attitudes

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Objectives. To evaluate the patients' beliefs and attitudes regarding a potential drug holiday during bisphosphonates treatment.
Methods and Materials. A structured questionnaire was developed to capture demographic data, personal experience and acceptance of bisphosphonates, level of knowledge about possible drug holiday, personal beliefs and attitudes regarding such regime. Osteoporotic patients following a bisphosphonate treatment have been invited to answer the questionnaire. SPSS 19.0 have been used to perform statistical analysis. Data are presented in mean (sd) format; a $p<0.05$ was considered significant
Results. A number of 61 subjects accepted to participate in this study. Demographic data revealed: age 64.1 (9.7) years, sex ratio (F:M) – 6:1, history of fractures in 32.8 cases, duration of bisphosphonate therapy: 3.67 (2.6) years. One third of the subjects were aware of the possibility of a drug holiday (no difference between gender, living area or education based groups). 78.7% believe that such a holiday will produce a "totally negative" and a "mainly negative" impact on the control of disease. Those who believe this holiday will have a greater impact are the same who predict a predominant negative impact – Pearson correlation index: o,53. Around half of the subjects (52.5%) declared them as being favorable to such a holiday, however these answers went mainly form those who believe this holiday will have a small impact on the control of disease and are ready to try this in the near future. 86.9% of the subjects expect their doctor to open such a subject. Those who are not favorable to such a holiday are ready to pay extra for the treatment (41%) or to receive a less expensive drug (42.5%).
Conclusions. There is a great need for patient education regarding the potential effects of drug holiday during the treatment of osteoporosis and to respond to various concerns patients do have. A large proportion of patients have negative feelings concerning this possibility. Those patients (not so many) that feel they control the disease are the same who are ready to try this change – this raise the question whether or not the patients follow their treatment because they are more scared than informed of osteoporosis.
Keywords. Osteoporosis, patient, questionnaire.

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In Urban Areas of Sivas City The Determination of Bone Mineral Density Reference Values of Healthy Women who Admitted to Cumhuriyet University Hospital Physical Medicine and Rehabilitation Outpatient Clinic

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Objective. Osteoporosis and its results of fractures became a major health problem worldwide. Classification of OP by WHO based on Bone Mineral Density (BMD) measurements, and therefore it's definite measurement is the major tool for OP diagnosis. There are many ways to measure BMD. The mostly used technique is Dual-Energy-X-Ray Absorptiometry (DEXA). Our aim in this study was to determine BMD reference values among healthy women in Sivas by using DEXA
Methods. 350 volunteered women between ages 20-79 who came to Cumhuriyet University Department of Physical Medicine and Rehabilitation took place in this study. A survey form was used to exclude women who have problems that may lead to secondary osteoporosis, who are pregnant, breast feeding, being already treated for osteoporosis, and located outside Sivas county area. Women who met the criteria, are tested for their lumbar vertebrae (L1-L4) and left hip (femur neck, trochanter, total hip) BMD values by DEXA method (Hologic QDR 4500 W). Obtained BMD values classified in 6 groups based on decades (from 20-29 to 70-79). Obtained BMD values evaluated statistically and BMD reference values for age groups in Sivas county area are determined.
Results. In our study mean BMD values between ages 20-49 are stable for spinal and femoral levels. In our study mean BMD values for lumbar area varies between 1.01 gr/ cm2 - 0.96 gr/cm2, for femoral area varies between 0.91 gr/cm2 -0.89 gr/cm2 among women who are between 20-49 years old and reaches peak values in both femoral and spinal area between 30-39 age group.
Conclusion. We determined BMD reference values of healthy women in Sivas county area in our study.
Keywords. Osteoporosis, Bone Mineral Density, Dual-Energy X-Ray Absorptiometry.

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Diabetes and Bone Densitometry Status: What Relationship?

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Introduction. Diabetic osteoporosis is characterized by bone remodeling with a depression of the bone formation, typically attributed to insulinopenia. Several mechanisms, direct and indirect, may contribute to bone mineral loss in diabetic patients. The propose of the work: To evaluate the relationship between bone status, mainly clinical and osteodensitométrique in 40 diabetic patients.
Material and Methods. Among 154 patients admitted to our department for evaluation of bone status, using bone densitometry, 40 thy diabetic cases were included. In order to homogenates our study, we are excluded all other risk factors may occur in the values of the DXA.
Results. The majority of patients were female (97 percent). the mean age was 59±5 years. The diabetes type II was found in 29 patients. The mean disease duration was 7 years. No patient was being treated with bone question. ODM average lumbar spine was - 1.2 (bone mineral density 1.15 g cm 3), femoral neck - 2.7 (0.596), total hip -2.3 (0.755).
Discussion and Conclusion. Our study consisted with the results of the literature. If the value of bone mineral density at the lumbar spine is probably overestimated by osteoarthritis signs, other sites show the impact of diabetes on bone fragility. The low level of bone remodeling and bone formation incentive to favor bone anabolic treatment for osteoporosis diabetes, as well as close monitoring of diabetic patients.
Keywords. Diabetes, osteoporosis, bone density.

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Coexistence of Transient Peripartum Osteoporosis of the Hip and Noninfectious Sacroilitis

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The aim of this article was to present coexistence of transient peripartum osteoporosis of the hip and noninfectious sacroilitis. A 36-year-old woman who had given stillbirth at 24 weeks of pregnancy was complaining hip pain without systemic symptoms for three months. Her complaints began during second trimester. The pain was aggravated with weight bearing activity. She has no morning stiffness or rest pain. There was no history of trauma, numbness, backache, fever or other constitutional symptoms, joints pain or swelling, skin rash, psoriasis. Lumbar range of motion (ROM) was full and painless and bilateral hip ROM were full but painful in physical examination. Straight leg raising, sacroiliac compression and mennel tests were negative. Neurological examination was normal. Erythrocyte sedimentation rate, C- reactive protein levels, full blood count and biochemical parameters were within normal range. Vitamin D level was measured as 14.7 ng/ml. Lumbar and pelvic x-rays were normal. Magnetic resonance imaging (MRI) showed bilateral transient osteoporosis of the hip and bilateral acute sacroiliitis. Calcium and vitamin D supplements were prescribed to the patient. The patient was allowed to weight-bear as tolerated and planned home-based exercise program. Symptoms improved significantly two-months later.
Keywords. Transient osteoporosis, Peripartum, Sacroiliitis.

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Bone Mineral Density Measurement in Patients with Type 2 Diabetes Mellitus

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Background. Diabetes mellitus is a metabolic disorder resulting from a defect in insulin secretion, insulin action, or both. A consequence of this is chronic hyperglycaemia with disturbances of carbohydrate, fat and protein metabolism.
Objectives. We have investigated whether there is any difference among the DM patients and control group in terms of lumbar and femur BMD (Bone Mineral Density), standard deviation scores (Z score and T score).
Methods. This randomized, prospective, controlled, single blind study was conducted in Physical medicine and Rehabilitation department of Bezm-i Alem Vakıf University, faculty of Medicine. The patient group individuals taken from patients with type 2 diabetes mellitus. Healthy individuals were enrolled as the control group patients. A total of 126 patients completed the study (63 study group, 63 control group).
Results. The laboratory tests of the patients had no significant differences. Bone mineral density of the lumbar (L1-4) T Score was significantly lower in the type 2 diabetic group($p<0.050$).
Conclusion. Osteoporosis, one of the potential complications of type 1 diabetes, although the effect on bone mass in Type 2 DM is controversial. BMD values in type 2 DM in different studies; increased, decreased, or normal, respectively. In our study, we have same results except lumbar (L1-L4) T score.
Keywords. Type 2 Diabetes mellitus, bone mineral density, Osteoporosis.

P-267

Sleep Apnea Increases Risk of Lomber Osteoporosis in Young People

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Aim. We planned to evaluate impact of obstructive sleep apnea (OSA) on bone mass indexes of femur and lumbal region separately and the risk of osteoporosis in young people with sleep apnea.
Method. A cross sectional study was done in Dıskapi Yildirim Beyazid Educational and Research Hospital, Department of Respiratory and Sleep Clinic between January 2011 and March 2012 for all patients who met the inclusion criteria and provided written informed consent. The study complied with the declaration of Helsinki and was approved by local research ethics committee. Ninety-five consecutive patients, referred to our sleep clinic for snoring, witnessed apnea and/or excessive daytime sleepiness were enrolled to the study. All patients underwent in-laboratory polysomography (PSG). Patients with sleep efficiency less than 40% and total sleep time less than 4 hours, chronic renal, pulmonary, cardiac, thyroid disease, diabetes mellitus, hypertension, patients with steroid usage and patients with known osteoporosis were excluded from the study. Bone Mass Density (BMD) were analysed by DEXA (Hologic QDR 2000) and measured in lumbar spine (L1-4) and total femur region. Calcium, phosphorus, parathormone and 25-OH D vitamin levels were detected. The doctors and the technicians were blind to the results.
Results. Totally 85 patients (32 females, 53 males) with mean age of 35,7±5,7 were enrolled to the study. 47 out of 85 patients were defined as normal, 33 patients as osteopenic and 5 patients as osteoporotic by DEXA test according to WHO criteria. Since the osteoporotic patients were small in number, osteopenic and osteoporotic patients were considered as one group in statistic tests. When apne-hypopnea index (AHI) 30 was taken as cut off, mean femur neck T score and total femur T score values were higher, while mean total lumber T scores and lumber BMD values were less in patients with AHI>=30 (Table I). AHI was inversely correlated with total Lomber T scores (r=-0,250, p=0,021) and positively correlated with Total Femur T scores (r=0.242, p=0,029). Blood tests did not show difference between two groups. In multiple logistic regression analysis, AHI>=30 was related with 4,26-fold (95% C.I. 1,496-12,1) increased risk of lumber osteopenia and osteoporosis. Severe sleep apnea was the only factor related with osteopenia and osteoporosis. in our young patient group.
Conclusion. We have found that sleep apnea increased the risk of lumber osteopenia and osteoporosis in young patients. Severe sleep apnea was related with increased BMD in femur, while with decreased BMD in lumber region. We advise young patients with lumber osteopenia and osteoporosis to be asked for sleep apnea symptoms.
Keywords. Sleep apnea, osteoporosis, bone mass index.

Table I. Bone and blood tests for osteopenia and osteoporosis in groups with AHI<30 and AHI>=30.

Parameters	AHI<30 (N=30)	AHI>=30 (N=55)	P
Age	36,7 ± 5	33,2 ± 6	<0,001
BMI	29,1 ± 5	29,9 ± 4	NS
Ca	9,32 ± 1	9,59 ± 0,48	NS
P	3,36 ± 1	3,42 ± 0,84	NS
PTH	44,2 ± 24,5	45,5 ± 18,4	NS
25 OH D3	15,5 ± 12,1	15,6 ± 8,9	NS
Total Lumbar T score	-0,52 ± 1,42	-1,28 ± 0,83	0,002
Femur Neck T score	-0,356 ± 0,84	0,04 ± 0,83	0,023
Total Femur T score	-0,365 ± 0,89	0,04 ± 0,75	0,044
Lumber BMD	1,01 ± 0,15	0,93 ± 0,1	0,01
Femoral BMD	0,96 ± 0,1	1,02 ± 0,13	0,05

NS: Non significant; BMD: Bone Mass Density; Ca: Calcium; P: Phosphor; PTH: Parathormone; AHI: Apne-hypopnea index.

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Relationship Between Body Mass Index and Bone Mineral Density In Menopausal and Post Menopausal Women

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According to some authors, there is a correlation between body weight and osteoporosis development in menopausal and postmenopausal women. Body mass index (BMI) values below 22-24 are associated with increased level of osteoporosis while BMI values higher than 26-28 are associated with decreased level of osteoporosis. Bone mineral density (BMD) is in correlation with body weight and lipid mass in menopausal and postmenopausal women. 80 woman of age 32-70 years were included on the study. According to the age group, they were divided on: premenopausal women 19 (age 32-47), menopausal woman 22 (age 48-54) and postmenopausal woman 39 (age 55-70). BMI kg/m2 and BMD g/cm2 have been measured on all examined women. The average BMI is: 26.29 in pre menopausal women, 28.65 in menopausal women and 29.89 in postmenopausal women. BMI values show no significant differences (p>0.01) between premenopausal and menopausal women but the difference was significant (p<0.01) between premenopausal and postmenopausal women. There is no significant difference between BMI values of menopausal and postmenopausal women that means women gain weight during menopause and postmenopause period. The average values of BMD T-score (L1-4) are: 0.14 in premenopause, -1.2 in menopause and -1.72 in postmenopause period. BMD T- score (L) values in premenopause are: min -2.3 and max 1.7. BMD T score (L) value in premenopause: min -3.6 and max 2.4. There is significant difference between average T score value of premenopausal and menopausal women (p<0.01). There is significant difference between T score (L) value of premenopausal and postmenopausal women (p<0.01). Comparing the BMD T score (L) value we found out that osteopenia and osteoporosis is more common in postmenopausal women. Osteopenia was discovered in 14 women, osteoporosis in 15 women that represents a significant difference compared to postmenopausal women where 2 developed osteopenia and none osteoporosis. Comparison of average T- score (F) values between premenopausal (0.12) and postmenopausal (-1.61) women shows significant differences between them (p<0.01). According to our results, osteopenia is more common in menopausal (10) and postmenopausal (22) women compared to premenopausal. Increased number of menopausal and postmenopausal women with low BMD T-score (F) value is because of the process of aging; although, according to some authors, multiple factors influence the development of osteoporosis (menopause, age, gender, weight, lifestyle, physical activity, genetic factor).
Conclusion. Many studies support the opinion about the protective role of obesity on bone mineral density and the development of osteoporosis even though there are other authors who disagree with that. According to our results, there is no protective role of obesity in the development of osteoporosis. There must be more detailed study in molecular and cellular level to explain the role and influence of obesity in BMD in postmenopausal women.
Keywords. BMI (body mass index), BMD (bone mineral density), obesity and overweight, osteopenia, osteoporosis, pre-menopauses, menopauses, post-menopauses.

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Osteoporosis and Osteopenia in Patients with Inflammatory Bowel Diseases

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Background. Patients with inflammatory bowel diseases (IBD) have a risk of osteoporosis development. Causes for decreasing of bone mineral density (BMD) are: disease itself, medications, vitamin D deficiency etc.
Objectives. The aim of our study was to evaluate mineral density of bones in IBD patients.
Methods. 159 patients with IBD were enrolled into the study (ulcerative colitis (UC) - 92 (58%) cases, Crohn's disease (CD) - 67 (42%) cases). Small-dosed digital X-ray device "Diascan" was used for screening of BMD. Distal part of radial bone was evaluated. Interpretation of results was done with T-criteria: T-criteria >-1.0 - normal bone mineral density, T-criteria from <=-1.0 to >-2.5 - osteopenia, T-criteria <=-2.5 - osteoporosis.
Results. Normal bone mineral density was seen in 33 (21%) cases, among that UC - 17 (52%), CD - 16 (48%) cases. 13 (39%) were male, and 20 (61%) were female. The mean age of patients was 36,4±3,8 years. Severity of diseases (UC was evaluated by using the Truelove&Witt score, CD was assessed by the Best index): mild - 10 (30%), moderate - 18 (55%), severe - 5 (15%). Disability was on 6 (18%) patients.
Osteopenia occurred in 62 (39%) cases, among that UC - 39 (63%), CD - 23 (37%). Male - 24 (39%), female - 38 (61%). The mean age of patients – 38,6±4,1 years. Severity of diseases: mild - 16 (26%), moderate - 35 (56%), severe - 11 (18%). Disability - 26 (42%).
Osteoporosis was revealed in 64 (40%) cases, among that UC - 36 (56%), CD - 28 (44%). 35 (55%) were male, 29 (45%) were female. The mean age – 32,2±3,8 years. Severity of diseases: mild - 12 (19%), moderate - 32 (50%), severe - 20 (31%). Disability was on 19(30%) patients.
Conclusions. Reduce of BMD was observes in the vast majority of patients - in 79% of cases. Developing of osteoporosis and osteopenia observed in young patients from 20 to 40 years (Fig. 1). Noteworthy a high percentage of disability patients.
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Keywords. Osteoporosis, Ulcerative colitis, Crohn's disease.

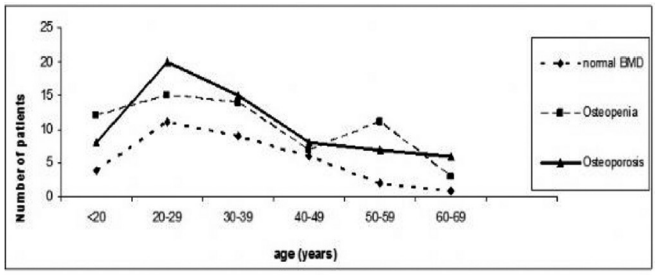

Fig. 1. Age groups of IBD patients with different BMD.

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Fracture and Quality of Life in Osteoporosis Patients

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Objective. The aim of This study is to detect the effect of fractures on the quality of life of osteoporosis patients.
Material and Method. The number of patients who applied to Physical medicine and rehabilitation unit and diagnosed as osteoporosis were 115. We recorded demographic information of them. Patients were divided into three group as vertebral fracture group, hip fracture group and nonfracture group. Quality of life was evaluated by Short Form 36. Bone mineral density of patients was detected by Lunar BTX dual x-ray absorptiometry device. For statistical analysis data was evaluated by NCSS(Number Cruncher Statistical System) 2007&PASS 2008 Statistical Software (Utah, USA) program.
Results. There were 106 women and 9 men in the study. Age of these 115 patients were changing between 49 and 90 with average of 68.32±8.91. There was statistically significant difference about the ages of groups, the mean age of non-fracture group (63,61±7,32) was lower than vertebra (70,04±9,11) and hip (75,5±6,22) fracture group (p<0,05). The L1- L4 T score of vertebra fracture group was significantly lower than non-fracture group (p<0,01). Pregnancy and birth number in vertebra fracture group and pregnancy number in non-fracture group were significantly higher than hip fracture group. There was no significant difference between groups about body mass index, living style (nutritional

calcium intake, cigarette smoking, coffee and alcohol use, physical activity, sun exposure, wearing style), menopause age, history of fracture (previous non vertebra and nonhip fractures). The hip fracture and vertebra fracture group had significantly lower femoral total T scores than non-fracture group (p<0,01). The quality of life of patients; physical function, physical role limitation, pain scores of SF 36 in vertebra and hip fracture group was significantly lower than non-fracture group, meaning worse quality of life (p>0,05).
Conclusions. Fractures have negative effects on quality of life of osteoporosis patients so the fracture related factors should be assessed properly and the main aim of treatment should base on prevention of fractures.
Keywords. Osteoporosis, quality of life, fracture.

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Bisphosphonate' Associated Osteonecrosis of the Jaw

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Introduction. Osteonecrosis of the jaw is a serious side effect in patients receiving nitrogen-containing bisphosphonates intravenously due to malignant diseases. Albeit far less frequently, osteonecrosis of the jaw has also been reported to occur due to the oral administration of nitrogen-containing bisphosphonates due to osteoporosis.
Case presentation. We report the case of a 49-year-old Caucasian woman suffering from osteoporosis who developed early stage osteonecrosis of the inferior left jaw, with chronic infections, after six months of oral bisphosphonate treatment. Our patient was treated by fluorescence-guided resection of the necrotic jaw bone areas, hyperbaric Oxygen Therapy; local inflammation was treated by removal of a wisdom tooth and repeat root resections. Radiographs revealed typical hallmarks of osteonecrosis of the jaw after eight months.
Conclusion. It is conceivable that, due to the pharmacological properties of bisphosphonates, a jaw bone that encounters frequent local inflammations is more likely to develop osteonecrosis.
Keywords. Osteonecrosis, jaw, Bisphosphonates.

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Bone Mineral Density Reference Database in an Algerian Male Population

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Background. The diagnosis of osteoporosis is based on patients bone mineral density (BMD) values that are compared to reference values.
Clinical studies that have compared BMD between populations showed that according to the reference curve used, the number of osteoporotic patients may vary and lead to an unnecessary treatment or inversely. Few data are available about bone mineral density in normal men.
It seemed us appropriate to determine these values in a sample of an Algerian population.
Objectives. To Determine the values of bone mineral density in healthy young men (aged from 21 to 39 years for the T-score), and to determine values of bone mineral density in healthy men (aged from 40 to 74years old for the Z-score).
Methods. It is a descriptive cross-sectional uni-centric study carried out in a randomly sampled population throughout 52 districts.
A minimum of 30 subjects were included in each 5-years age group ranging from 20 to 74 years.
Non-inclusion criteria: any situation suggesting the presence of osteoporosis, which can interfere with bone metabolism or with BMD measurement.
Psychiatric illness and alcoholism.
BMD was measured at the hip and spine using a Hologic Discovery 2000 densitometer (Hologic Inc., Waltham, MA).
Statistical analysis was performed using SPSS version 8.0.
Results. three hundred and thirty one men (331) were included.
Eleven (11) groups were obtained (5-Years age groups) and mean BMD values were calculated for each one.
The BMD values at the total hip and total spine (sites most used in practice) are respectively (mean ± SD) 1.023±0.119 g/cm2 and 1.038±0.125 g/cm2.
The average bone density at various sites of the hip and spine are maximum before age 40.
Analysis of T-score at the hip and spine, shows that the incidence of osteoporosis was overestimated by 9.4% comparatively when using NHANES reference.
The bone mineral loss is very low over the years and is not significant.
Conclusions. This study showed that BMD of our population is different from a normal range and this could lead to misclassify significant percentage of subjects and overestimate the prevalence of osteoporosis.
This difference has already been proven in several populations.
Experts strongly recommend the use of local references.
Keywords. Osteoporosis, reference curve, men osteoporosis, bone mineral density.

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Osteoporosis and Osteoporotic Fractures in Serbia – Pilot Study

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Background. Osteoporosis (OP) as asymptomatic disease is often diagnosed after the complication- fracture, had occurred. There is insufficient data regarding the incidence and prevalence of OP in Serbia, yet.
Aim. To investigate frequency of OP and osteoporotic fractures in persons over 50 years, in Serbia.
Methods. Physicians from four medical centers in Serbia, during their routine work, asked consecutive persons over 50 years (N=2475,1784 females) to answer simple questionnaire (densitometry-DXA testing yes/no, DXA OP yes/no, fracture yes/no, X ray fracture yes/no), to investigate rough frequency of OP, clinical and subclinical osteoporotic fractures (vertebral, wrist, hip, humerus). Also, a pilot study with the same goal was carried out in Institute of rheumatology in Belgrade, in a group of persons over 50 years (N=2026,1992 females), who were referred to central skeletal densitometry testing, because of presence of clinical risk factors for OP.
Results. Out of 2475 examined persons, DXA testing underwent 543 of them and OP was found in 92/453 women, in 5/90 men, while osteoporotic fractures were found in 221 persons comprising 14,5% of all (with 2% clinically in apparent vertebral fractures, detected incidentally by X rays), with increasing frequency with ageing observed. Among persons with clinical risk factors for OP, DXA testing found OP in 697/1992 women and in 11/34 men. Osteoporotic fractures were found in 412 persons, in 406/1992 women and in 6/34 men, with increasing frequency with age. Osteoporotic fractures were found in 155 women classified as non-osteoporotic by DXA findings.
Conclusions. The frequency of OP among persons over 50 years was 28% in women, 5,6% in men, while osteoporotic fractures were found in 11% women and in 5,47% men. Among those with the risk factors for OP, DXA testing confirmed OP in 35% women, in 32,4% men, with osteoporotic fractures found in 22,9% women and in 17,5% men. Out of all fractures recorded, 37% were found in women classified as non-osteoporotic by DXA findings.
Keywords. Osteoporosis, osteoporotic fractures, epidemiology.

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MEFV Gene Mutatıon Frequency and Correlatıon of Mutatıons wıth Clınıcal Symptoms in Gout

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Gout is a clinical syndrome that occurs as an inflammatory response to increased concentration of uric acid and monosodium urate crystals. IL – 1B is the most important cytokine in gout pathogenesis. Familial Mediterranean fever (FMF) is a hereditary autoinflammatory disease with autosomal recessive inheritance. MEFV gene mutation may contribute to gout pathogenesis with increased IL-1B activation. Seventy one consecutive patients (age: 61.73±11.73, F/M: 14/57) with the diagnosis of gout disease and 50 sex and age matched (age 61.48±11.97, F/M: 10/40) healthy control were enrolled into the study. Patients who had chronic renal failure and who took inadequate medical treatment for gout were not included into the study. Patients with the diagnosis of FMF or who had FMF related symptoms were excluded from the study. A family history of FMF was another exclusion criterion. FMF gene's 2. and 10. lineup was studied using genomic DNA isolated from both patients and healthy control group. MEFV gene mutations were detected in 24 (33,8 %) gout patients and in 13 (26%) healthy control group. Although the frequency of MEFV gene mutations in patients group was

higher than in healthy control group, the difference was not statistically important (p=0.473). The comparison of each mutation did not show any statistical important difference (p>0.05). The second gouty arthritis attack occurred in shorter time in patient with MEVF gene mutation than the patient without mutation. The difference was statistically significant (p=0.014). Thrombocyte level was higher in patients with MEFV gene mutation ((p=0.026). The number of patients having tophus was higher in patients with MEFV gene mutation (8,5%) than the patients without MEVF gene mutation (1,4%) ((p=0.005). The frequency of acute gouty arthritis attack was higher in patients with MEVF mutation ((p<0.001). Although there is not any increase in frequency of MEFV gene mutation in patients with gout but the presence of MEFV gene mutation may influence the clinical progress of gout.

Keywords. Gout, Familial Mediterranean fever, MEFV gene mutation.

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Actinomycosis of The Foot Bones: About 2 Cases

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Pyogenic Spondylodiscitis in the Center of Tunisia: Study of 23 Cases

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Introduction. Infectious spondylodiscitis corresponds to infection of the intervertebral disc and the adjacent vertebral bodies. This infection remains common in Tunisia and it is a major cause of morbidity and mortality. The purpose of this study is to describe the characteristics of a particular form which is pyogenic spondylodiscitis.
Materials and Methods. This is a retrospective study of 23 cases of pyogenic spondylodiscitis collected in rheumatology department of the hospital Farhat Hached in Tunisia over a period of 15 years [1998-2013].
Results. Within 78 cases of infectious spondylodiscitis hospitalized in our department 23 were secondary to pyogenic germs. Our population consists of 18 men and 5 women with a mean age of 62 years [30-84]. Promoting factors were diabetes in 34.8 % of cases, hemodialysis in 4.3 % of cases, systemic corticosteroids in 4.3% of cases, visceral surgery in 8.7% of cases and spinal surgery in 13% of cases. The sites of infection were respectively lumbar in 82.6%, cervical in 8.7% and dorsal in 4.3% of cases. Spondylodiscitis were multifocal in 4.3% and multistage in 8.7% of cases. The physical signs were inflammatory back pain in 100% of cases, fever and deterioration of the general status in 43.5% of cases and neurological signs in 60.9% of cases. A single case of spinal cord compression was noted. The inflammatory syndrome was missing in one case. The spinal MRI performed in 21 cases showed infiltration of the soft tissue in 13% of cases, perivertebral abscess in 26.1% of cases and a root canal abscess in 8.7% of cases. The biopsy made in 47.8% of cases showed an infectious reached in 27.7% of cases. Isolated bacteria were Staphylococcus aureus in 34.7% of cases, streptococcus in 17.4% of cases and gram negative bacilli in 26 % of cases. In 21.7% of cases, the germ was not isolated but suspected on the clinical, radiological and evolutionary arguments. Streptococcus bovis endocarditis associated occurred in one case. The treatment consisted on appropriate antibiotics in all cases and decompressive laminectomy in 2 cases. Two deaths occurred by septic shock.
Conclusion. Pyogenic spondylodiscitis is a severe infection. The most offending organisms are Staphylococcus aureus and gram negative bacilli.
Keywords. Pyogenic spondylodiscitis, Spinal MRI, Antibiotics.

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Septic Arthritis: Study of a Series of 24 Cases

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Introduction. Septic arthritis is a consequence of the invasion of the synovium by living microorganisms. This is an emergency because it urges the functional prognosis. Being rare, the incidence of septic arthritis is probably underestimated and poses a diagnostic problem. The objective of this study is to determine its epidemiological, clinical and paraclinical characteristics.
Materials and Methods. We realized a retrospective study including 24 patients hospitalized in Department of Rheumatology for Septic arthritis between years 1999 and 2013.
Results. There were 11 men and 13 women with a mean age of 53.7 years [25-95]. Five patients were diabetic. The knee was affected in 17 cases, the ankle in 3 cases, the elbow in 2 cases, the shoulder in one case and the sternoclavicular joint in one case. Fever was present in 13 cases and an inflammatory syndrome in all cases. An entrance door skin has been identified in one case, genital in one case, urinary in one case, and pulmonary in one case. Identified germs were Staphylococcus aureus in 6 cases, streptococcus in 4 cases, Gram negative bacilli in two cases, Actinomyces, Gonorrhea and Salmonella typhi in one case each, no germ was found in 8 patients. X-rays were normal in 14 cases. Scanner practiced in one case and MRI practiced in 3 cases showed signs for septic arthritis. All patients were treated with antibiotics, administered parenterally in 19 patients. Articular lavage was done in 13 cases. Surgical treatment was necessary for 5 patients after failure of medical treatment. The evolution was favorable in 20 cases.
Conclusion. The diagnosis of septic arthritis is based on a set of arguments. The prognosis depends on the speed of therapeutic care.
Keywords. Septic arthritis, germs, treatment.

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Renal Function at Index Consult of Filipino Gout Patients Seen at Rheumatology Clinics

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Background and Objectives. Gout is an inflammatory arthritis involving the deposition of uric crystals. It has been known to cause renal disease in the form of acute or chronic urate nephropathy, or urolithiases. Numerous studies have been published worldwide, defining proper handling and management of such cases. Despite such recommendations, the renal function of these patients complicates the management. Administration of the properly- adjusted medications and referrals to appropriate services are delayed because of lack of data at the patient's initial visit. This study therefore aims to describe the renal function at index consult of Filipino gout patients seen in four rheumatology clinics.
Methods. This study is a retrospective descriptive study involving gout patients seen in four rheumatology clinics. A total of 349 patients were identified. Records of the patients' index consult, were reviewed. Demographic and disease characteristics were noted. Renal function was identified using the Cockroft- Gault equation for estimated glomerular filtration rate. Univariate analysis was done, characteristics of patients with good and poor renal function were compared.
Results. At index consult, the average serum creatinine and uric acid are 1.68mg/dL and 9.04 mg/ dL, respectively. The average creatinine clearance is 64.31 mL/min, and 50.71% presented with an eGFR of <60 mL/min at index consult. Chi-square test was used, which showed that the older age at onset and diagnosis (p<.0001), long disease duration (p<.0001), later age at diagnosis (p<.0001), presence of tophi (p=.0005), more than three attacks per year (p=.0007), a family history of gout and the presence of hypertension (p=.0005), correlated with poor renal function (eGFR <60 mL/min). Interestingly, results also showed that females tend to have poorer renal function at index consult compared to males (p=.0003).
Conclusion. This study has documented that, in gout patients presenting at index consult, poor renal function is expected in females, those with hypertension, frequent gouty attacks, and the presence of tophi. It is thus recommended that this data be used as a guiding tool to better prognosticate patients, appropriate medication adjustment, and immediate referrals to proper services; at the initial visit.
Keywords. Gout, renal function, creatinine, uric acid, nephropathy.

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Reactive Arthritis Related to Intravesical Bacillus Galmette-Guerin (BCG) Immunotherapy

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Multiple Myeloma Might Mimic Various Rheumatic Diseases

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Background. Multiple myeloma (MM) is a B-cell malignancy characterized by an abnormal proliferation of plasma cells able to produce a monoclonal immunoglobulin. It is the second most common hematological malignancy. Although the typical manifestations of the disease are summarized by CRAB symptoms (hypercalcemia, renal insufficiency, anemia and bone lesions), patients may be asymptomatic (11% of cases) or might present with other clinical features, suggesting a rheumatological disease: bone pain, pathologic fractures, weakness/fatigue, serious infection, weight loss, paraesthesias, headaches, visual changes. Connective tissue disorders may share some of the features of MM and must be excluded.
Objectives. To assess the clinical and laboratory features of newly diagnosed MM that firstly presented as rheumatic diseases.
Methods. Starting from January 2013 until May 2014, consecutive newly diagnosed MM were included in this study. Retrospective analysis was made and initial rheumatologic referral diagnosis as well as clinical and laboratory features were assessed.
Results. Ten patients that presented in our clinic with rheumatic features, were finally diagnosed during 16 months with MM. Seven presented as a spondylarthritis, one patient with polyarthritis and two patients with clinical features of polymyalgia rheumatica. Seven patients were female and 3 patients were male, mean age was 67.1 years. Anemia was found in 50% of patients, elevated inflammatory markers (erythrocyte sedimentation rate and/or C-reactive protein) in 90%, renal failure in 50% and hypercalcemia in 50% of patients. Serum immunofixation confirmed the presence of a case of IgA type myeloma, another 2 of kappa type and 4 cases of lambda chain isotype MM. Three patients had non-secretory myeloma. They presented with inflammatory neck and back pain for a median period of 5,3 months, radiographic bone lesions (2 patients), raised uric acid and renal failure. Patients with lambda type MM had musculoskeletal complaints for a median time of 4 months: features of polymyalgia rheumatica (pain and stiffness in shoulder girdles) and inflammatory back pain. All of them had raised inflammatory markers (mean ESR 78 mm/h), 75% - anemia, 50% - renal failure and radiographic bone lesions. Patients with kappa type MM had complaints for about 7 months of polyarthralgia and hand edema, mistaken as rheumatoid arthritis, both of them having upper vertebral bone lesions at presentation. The patient that was diagnosed with MM type IgA had anemia, renal failure and was complaining of inflammatory back pain for about 7 months.
Conclusions. It is important to distinguish MM both from benign causes (osteoarthritis) and from autoimmune rheumatic disease (polymyalgia rheumatica, rheumatoid arthritis) for the purpose of prognosis and treatment.
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Keywords. Multiple myeloma, rheumatic diseases, musculoskeletal maniphestations.

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Vitamin D status in Chronic Periodontitis Patients. A Preliminary Study

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Objectives. Vitamin D has been found recently to play a role in respect to systemic diseases such as cardiovascular disease, cancer, and periodontal disease. We aimed to identify prevalence of vitamin D insufficiency and or deficiency in patients suffering from chronic periodontal disease and to analyze association between vitamin d status and chronic periodontitis severity.
Material and Methods. In this cross-sectional study, we included women aged between 40 to 60 years with chronic periodontitis selected from the Counseling Center and Dental Care (CCDC) in Dental faculty of Rabat. Plasma baseline 25-hydroxy-vit D levels were measured by High Performance Liquid Chromatography Mass Spectrometry (HPLC-MS-MS) method. Deficiency was defined as <=10 ng/mL 25 (OH) vitamin D and insufficiency as >10 and <=30 ng/mL. Chronic periodontitis features (Clinical attachment level (CAL), gingival bleeding index (GI), and probing depth (PD) and Simplified Oral Hygiene Index (OHI-S)) were determined in all participants by an experimented examiner. The severity of chronic periodontitis was defined according to the World Health Organization (WHO) classification. A statistical analysis was conducted to determine the relationship between chronic periodontitis and the status of vitamin D.
Results. Eighteen patients (mean age of 48±5.5 years [40-58]) were included until now. Abnormal status of vitamin D (<30ng/ml) was found in 88.9% of them (N=16). There was no association between vitamin D levels and severity parameters of chronic periodontitis.
Conclusion. Although preliminary due to the small sample size, results of this study suggest that Vitamin D deficiency was frequent in patients with chronic periodontitis. It may be convenient to look for vitamin D deficiency and to correct vitamin D nutritional status in chronic periodontitis patients. A case-control study on larger sample is ongoing to analyze association between vitamin D status and periodontal disease features.
Keywords. Periodontitis, Severity, Vitamin D, Deficiency, Insufficiency.

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Effects of Whole Body Vibration on the Serum Dentin Matrix Protein Level

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Background. Dentin matrix protein (DMP) is a mechanosensitive phosphoprotein expressed in osteocytes and associated with the extracellular matrix.
Objectives. The aim of this study was to determine whether serum DMP levels were affected by applying whole-body vibration (WBV) in healthy young adults.
Methods. Healthy eight volunteer men (20–45 years) were recruited for the study. WBV was applied to the experimental group at frequency of 35 Hz, 2.2 mm peak-to-peak amplitude and duration of 45 seconds while standing the upright posture on the platform. Serum DMP levels was measured before and on the first, second, sixth, eighth, tenth, twelfth, fourteenth, sixteenth ve eighteenth minute after vibration. A researcher was blind to the measurement of samples. Serum DMP level were measured by Human Dentin Matrix Protein ELISA kit.
Results. Serum DMP level before WBV was 22.5 ± 5.8 ng / ml and there was no significant change after WBV (F (2.2-13.3) = 1.45 p=0.271).
Conclusions. The findings of this study reveals that serum DMP level in the healthy young adult men did not change in early period (first 18 minutes after WBV).
Keywords. Bone, Dentin matrix protein, Osteocyte, Cyclic mechanical loading.

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Prevalence and Risk Factors of Vitamin D Deficiency in Patients with Widespread Musculoskeletal Pain

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Background. Vitamin D deficiency is a worldwide common health problems. Vitamin D deficiency in adults has been associated with proximal muscle weakness, skeletal mineralization defect, and an increased risk of falling. Patients with vitamin D deficiency commonly complain of widespread pain in the body.
Objective. The aim of this study was to examine the prevalence and risk factors of 25-hydroxyvitamin D deficiency in patients complaining of widespread musculoskeletal pain.
Methods. In this cross-sectional study, 8457 patients with widespread musculoskeletal pain (7772 females, 685 males), aged 46.7 (range 20-100) years were included. Serum 25-hydroxyvitamin D was measured with ELISA method. Patients were classified into two groups: 1) Patients with vitamin D deficiency (<20 ng/ml) and 2). Patients without vitamin D deficiency (>20 ng/ml).
Results. Prevalence of vitamin D deficiency was found to be 71.7%. A binary logistic regression model showed that low 25(OH)Vit D level was associated with gender, age and month in which 25(OH) hypovitaminosis was determined. The risk of low 25(OH) Vit D was found to be 2.15 times higher in female patients and 1.52 times higher on March and 1.55 times higher on April.
Conclusion. This study indicates that Vitamin D deficiency should be taken into consideration in patients with widespread musculoskeletal pain, and some precautions such as sunbathe during summer should be recommended patients having risk of vitamin D deficiency.
Keywords. Osteomalacia, Vitamin D, Widespread body pain.

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Neuropathic Arthropathy of the Hand Associated with Cervical Syringomyelia

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Spinal Cord Compression: Etiology and Treatment (About 12 Cases)

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Introduction. Spinal cord compression is a diagnostic and therapeutic emergency which may require early surgical treatment.
Materials and Methods. This is a retrospective study of 12 cases of patients who were hospitalized in department of rheumatology in Hospital Farhat Hached in Tunisia between 1998 and 2013 for rachialgia with neurological disorders.
Results. Our population consists of 4 women and 8 men with a mean age of 56.4 years. The concept of trauma was present in 25% of cases. Inflammatory rachialgia were reported in 58.33% of cases. In 41.67% of cases it was mechanical rachialgia. The location was lumbar in 58.33 % of cases, dorsal in 33.33% of cases and cervical in 16.66% of cases with radicular syndrome in 75% of cases: Lombosciatalgies (77%) and cervicobrachial neuralgia (23%). Sensory disorder were noted in 33.33% of patients with motor disorders in 58.33% of cases, spinal claudication with half of the patients and genito- sphincter dysfunction with 2 patients. The examination revealed a motor deficit in 50% of cases with atrophy in one case. Sharp reflexes were noted in 58.33% of cases with a Babinski sign in 33.33% of cases and Hoffman sign in 25% of cases. Epicritic sensitivity disorders were noted in 41.66% of cases and those of deep sensibility in one case with sensory level with two patients. Two patients had a saddle anesthesia. MRI, when it was made, showed a mechanical origin in 5 cases: cervical spondylolisthesis (n=1), narrow lumbar canal (n=2), lumbar disc herniation (n=1), posterior joint osteoarthritis of the lumbar spine (n=1). In other cases it was: spinal metastases (n=1), bone localization of multiple myeloma (n=2), infectious spondylodiscitis (n=4). Two patients underwent surgical treatment: laminectomy and treatment of spondylolisthesis.
Conclusion. Spinal cord compression seems to be more common in middle-aged male. The clinical picture is highly suggestive and should not be ignored. In addition to the mechanical origin, infectious vertebral osteomyelitis occupy a significant place in the etiologic assessment of spinal cord compression.
Keywords. Spinal cord, Compression, MRI, multiple myeloma, spondylodiscitis.

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Evaluation of the Effectiveness of Exercises in Patients with Multiple Sclerosis

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Objectives. The aim of this study is to evaluate the effects of exercises on quality of life, and psychological status in patients with Multiple Sclerosis (MS).
Material and Methods. Forty five patients diagnosed with MS were observed in this study. Outcome measures including the MS International Quality of Life Scale (MusiQoL) and the Hospital Anxiety Depression (HADS) Inventory were assessed at the baseline and at 16 weeks.
Results. Forty five participants completed the exercise programme. The mean age was 32.83±3.64 years. The mean duration of disease was 6.97±3.15 years. The patients had significant improvements in anxiety, and the quality of life after the 16-week exercise programme. The mean disease duration was 6.97±3.15 years. Among the patients, 62.5% had depressive symptoms (HADS-D>7) and 52.7% had anxious symptoms (HADS-A>8) at the baseline. After the 16-week exercise programme, showed significant improvements in terms of the HADS-A and MusiQoL scores (p<0,05).
Conclusion. Our study has demonstrated that the exercises may improve the quality of life, and the psychological status in the patients with MS.
Keywords. Multiple sclerosis, exercise, quality of life, depression, anxiety.

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Upper Extremıty Problems in Doner Kebap Masters

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Purpose. Doner kebab is a food specific to Turkey; a cone-shaped meat is placed vertically on a high place. The doner-kebab chefs stand against the meat and cut the meat by using both of their two upper extremities. The aim of our study is to investigate the upper extremity disorders of doner chefs.(R3.1)
Subjects and Methods. Doner kebab chefs have been taken as study group, and the volunteers who were no doner kebab chefs and haven't needed dense upper-extremity-effort in their business lives have been taken as control group. A survey form has been prepared for obtaining data about participants' ages, working experience duration (years), daily work hours, working in a second job, diseases, drug usage, and any musculoskeletal (lasting at least 1 week) complaint in last 6 months.

Table I. Comparison of upper extremity complaints between groups.

	Study group (n=82)	Control group (n=82)
Hand pain	10 (12%)	1 (1.2%)
Hand numbness	1 (1.2%)	1 (1.2%)
Elbow pain	13 (15.8%)	4 (4.8%)
Shoulder pain	7 (8.5%)	7 (8.5%)
Neck pain	6 (7.3%)	11 (13%)

Results. Totally 164 individuals have participated in study, consisting of 82 doner chefs and 82 volunteers. In 20.6% of study group and 15.6% of control group, an upper extremity musculoskeletal system disorder has been detected. Lateral epicondylitis was statistically significantly more frequent in work group.

Table II. Comparison of diagnosis of the upper limbs between groups.

	Study group (n=82)	Control group (n=82)
Carpal tunnel syndrome	1 (1.2%)	1 (1.2%)
De Quervain's disease	1 (1.2%)	3 (3.6%)
Lateral epicondylitis	12 (14.6%)	2 (2.4%)
Medial epicondylitis	1 (1.2%)	2 (2.4%)
Biceps tendinitis	1 (1.2%)	0 (0%)
Rotator cuff tear	1 (1.2%)	0 (0%)

Conclusion. The hand pain and lateral epicondylitis is more frequent in doner chefs than other business branches.
Keywords. Doner kebap master, Cumulative trauma disorders, Upper extremity problems.

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Comparison of the Effects of Calisthenic Exercises on Balance and Walking Speeds of Patients Having Multiple Sclerosis and Cervical Discopathy

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Objectives. The aim of this study is to compare the effects of calisthenic exercises on balance and walking speeds of patients having multiple sclerosis (MS) and cervical discopathy.
Material and Methods. The patients diagnosed for MS and the patients having cervical discopathy were randomized into two exercise groups. Under the observation of physiotherapist, calisthenic exercise has been implemented on both groups. Cases' 10-meter walking test and Berg Balance Scale test results have been evaluated at baseline and 12th week.
Results. 20 MS patients and 20 patients having cervical discopathy were involved in this study. The mean age of MS patient group was 33.00 ± 4.06 years. The mean age of patients having cervical discopathy was 32±4.86 years. Both groups showed significant improvement in in the balance, 10-meter walking test at the end of the 12-week exercise program. Significant differences have been found between groups as a result of Berg Balance Score (BBS) and 10-meter walking test performed before and after calisthenic exercises with MS patients and the patients having cervical discopathy.
Conclusions. In patients with MS, calisthenic exercises performed may improve the balance and the functional status.
Keywords. Multiple sclerosis, cervical discopathy, calisthenic exercises.

Table I. Pre- and post-exercise scores and the differences in the scores within the groups, and the pre- and post-exercise intergroup comparison of the groups (mean ± SD).

	Study group (n=20)	Control group (n=20)	*p*2
BBS			
Pre-exercise	48.95 ± 5.38	51.24 ± 5.54	$p<0.05$
Post-exercise	50.40 ± 5.27	52.84 ± 4.22	$p<0.05$
Difference	1.45 ± 1.85	1.60 ± 1.54	$p>0.05$
*p*1	$p<0.05$	$p<0.05$	
10 m walking test (s)			
Pre-exercise	9.95 ± 1.92	7.42 ± 2.01	$p<0.05$
Post-exercise	9.02 ± 1.78	6.95 ± 2.55	$p<0.05$
Difference	0.93 ± 1.12	0.47 ± 1.02	$p>0.05$
*p*1	$p<0.05$	$p<0.05$	

BBS: Berg Balance Scale; SD: Standard Deviation; P1 Pre- and post-exercise intragroup comparison, P2 inter-group comparison. *$p<0.05$.

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Subacromial and Subdeltoid Bursitis Related to Rabies Vaccine Administration

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The Status of Serum Vitamin D in Patients Attending a Physical Medicine and Rehabilitation in Turkey

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Background. Deficiency of vitamin D is becoming a global public health problem. Vitamin D plays important roles in maintaining the balance of calcium and phosphorus metabolism and keeping normal bone mineral density levels. Vitamin D status is affected by many factors such as geographical environment, physiological factors and life style.
The objectives of present study were to estimate the prevalence of vitamin D deficiency among patients attended in the outpatients clinic of Physical Medicine and Rehabilitation (PMR) department.
Methods. This was a retrospective study of 1400 patients who presented to the outpatient clinic of PMR between January 2011 and April 2013 were recruited consecutively into the study. Biochemical markers of patients were measured. Total 25(OH)D was measured from stored plasma specimens using liquid chromatography-mass spectrometry. Vitamin D deficiency was defined as serum 25-(OH) vitamin D 20 ng/ml. Socio-demographic characteristics, lifestyle and dietary habits were obtained using questionnaires.
Results. The mean age of the participants was 60.2 (range: 18-97) and 88.7% were women. The mean serum 25(OH)D level was 22.5 ng/ml and the prevalence of serum 25(OH)D level was in 54.1% of all patients. The mean level of 25OH D in women was significantly higher than in men (22.9 ng/mL vs 19.8 ng/mL, $p=0.019$). The participants aged 60 years and above have highest serum 25(OH) D levels (25.7 ng/ml vs 18.4 ng/ml, $p=0.000$).
Conclusion. Mean serum 25(OH)D level was close to represent range considered to represent vitamin D deficiency. Participants aged 60 or older showed the highest mean values of serum 25(OH)D. Future studies are certainly warranted to understand the prevalence of vitamin D deficiency and influencing factors.
Keywords. Deficiency of vitamin D, influencing factors, outpatients clinic of Physical Medicine and Rehabilitation (PMR) department.

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The Comparative Efficacy of Kinesio Taping and Local Injection Therapy in Patients with Subacromial Impingement Syndrome

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The aim of this study was to compare the therapeutic effects of kinesio taping (KT) and local subacromial injection in patients with subacromial impingement syndrome (SIS) with regard to pain, range of motion (ROM) and disability. Sixty-one patients with subacromial impingement syndrome were enrolled into the study. Demographic and clinical characteristics including age, sex, duration of disease were recorded. The patients were randomized into two treatment groups receiving either a single corticosteroid and local anesthetic (LA) injection, or kinesio taping performed three times by intervals of 3 day. Visual analog scale (VAS) was used to assess pain intensity, shoulder abduction, flexion and rotation range of motion (ROM) degrees were recorded and Shoulder Pain and Disability Index (SPADI) was performed to evaluate functional disability, before treatment, at the first and fourth weeks after therapies. Both groups were educated for home exercise programme.
Forty-eight female and 13 male patients (mean age, 42.4+6.48 years; mean disease duration, 2.35+0.79 months) were included in the study. There were no differences between the groups regarding demographic variables on entry to the

study. Pain, functional outcome measures were determined to have improved significantly in both groups at the end of therapies at first and fourth weeks, but these improvements were more significant in the injection group than in kinesio taping group. The improvements in pain at rest, shoulder abduction degrees, and SPADI scores at first and fourth weeks were statistically higher in injection group than in kinesio taping group.
We imply that single dose subacromial injection and three times of kinesio taping by 3 day intervals have favorable effects on pain and functional status in the early period (up to one month) of subacromial impingment syndrome. Although the improvement in pain intensity at rest, abduction ROM measures and disability were better with local injection, KT may be an alternative non-invasive method for patients suffering from subacromial impingement syndrome in the early period.
Keywords. Subacromial impingement syndrome, kinesio taping, subacromial, steroid injection, pain, function.

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Anti-Cyclic Citrullinated Peptide Antibodies in Patients with Sarcoidosis

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Introduction. Anti-cyclic citrullinated peptide (anti-CCP) antibodies have a high predictive value in rheumatoid arthritis (RA) patients and are associated with disease severity. Sarcoidosis is a chronic inflammatory disease characterized by non-calcified granuloma formations.
Aim. To determining the prevalence of anti-CCP antibodies in patients with sarcoidosis, and identifying a possible correlation with clinical and laboratory findings.
Materials and Methods. Forty-two patients presenting to the rheumatology polyclinic and diagnosed with sarcoidosis as a result of the examinations made, 45 RA patients and 45 healthy subjects were included in the study. Demographic, clinical, serological and radiological data of all patients were recorded. Anti-CCP antibodies were evaluated by using a second-generation ELISA method. Rheumatoid factor (RF) IgM was determined with the nephelometry method.
Results. Forty-two patients (10 males) were included in the study. Mean patient age was 45.2years (20-70 years) and mean duration of disease was 3.5 years. Two sarcoidosis patients (4.7%) and 38(84.4%) RA patients were found to be positive for anti-CCP antibodies while the antibody wasn't detected in any healthy subject. The two sarcoidosis patients found positive for anti-CCP were also diagnosed with rheumatoid arthritis. RF positivity was detected in 7 sarcoidosis patients (16.6%) and in only one subject in the control group.
Conclusion. The prevalence of anti-CCP antibodies in patients with sarcoidosis was found to be significantly lower than RA patients and similar with the healthy control group. This result shows that anti-CCP antibodies don't have an important role in the pathogenesis of sarcoidosis, but could be important in revealing the overlap syndromes of sarcoidosis-RA.
Keywords. Sarcoidosis, anti-cyclic citrullinated peptide antibodies, frequency.

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Assessment of Balance and Falls in Geriatric Patients and Determining Risk Factors

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Background. With increase in the lifespan of the human being, elderly population increasing all over the world as well as in our country. Falls are common and important health problem for older adults, causing severe morbidity, mortality, hospital and residential care settings admission and increased health care costs.
Objectives. The purpose of this study is to assess balance and falls in geriatric patients and to determine the risk factors.140 voluntary geriatric patients (113 women, 27 men) over 65 years from Ankara Physical Medicine and Rehabilitation Training and Research Hospital were enrolled in our study. Inclusion criteria was walking without the assistance of another person. Any patient with mental or organic impairment preventing cooperation, unstable cardiovascular or metabolic disease, severe hearing or visual loss and prior cerebrovascular disease history in the last 3 months were excluded.
Methods. Demographical characteristics of patients were recorded. Risk factors for falls as neurological disease, visual problems, hearing problems, medication used and polipharmacy, urinary incontinence, assistive device using, living alone, using alcohol and tobacco, environmental hazards causing falls and fractures, getting regular exercises were questioned. Mini Mental Status Examination (MMSE) was used to assess cognitive function. Berg Balance Scale (BBS), Single leg stance test right/left, Timed Up Go test(TUG), Five times Sit to Stand Test (FSST) were used to assess balance. Muscle strength for upper extremity was evaluated with Jamar. Lower extremity muscle strength was assessed indirectly with FSST. Fear of falling was assessed with Falls Efficacy Scale – International(FES-I). Activities of daily living was evaluated with Barthel Index. Lower extremity joint position sense was assessed with clinical examination. Patients' blood 25 OH Vitamin D3 levels were determined
Results. Data about patients demographical characteristics are listed in Table I Statistically significant relation was found between fall history and neurological disease presence, 2 or 3 and more different group medicine use, polipharmacy, urinary incontinence presence, assistive device using and getting no regular exercises. There was statistically significant relation between fall history and age, blood 25 OH Vitamin D3 levels, right/left hand dynamometer values, TUG, FSST, Single leg stance test right/left, BBS, Barthel Index, FES-I scores. It was found that blood 25 OH Vitamin D3 level, left hand dynamometer value, neurological disease, urinary incontinence presence, getting no regular exercises, BBS, Barthel Index scores were predictors of falling.
Conclusion. Geriatric population should be carefully examined in terms of risk factors forfalls. Detection and amelioration of risk factors can significantly reduce the rate of future falls. Preventive treatment methods and educational programs should be administered for elderly individuals who are at risk of falling.
Keywords. Fall, balance, geriatrics.

Table I.

		Fallers (79) n/%	Nonfallers (61) n/%	X2	*p*
Gender	Women Men	66 (83. 5%) 13 (16. 5%)	47 (77. 0%) 14 (23. 0%)	0.933	0.334
Marital status	Living alone Married	38 (48. 1%) 41 (51. 9%)	27 (44. 3%) 34/55. 7%)	0.204	0.652
Educational level	No education Primary education College /university	19 (24. 1%) 46 (58. 2%) 14 (17. 7%)	23 (37. 7%) 33 (54. 1) 5 (8. 2)	4.544	0.103
Employment	Housewife Retired	55 (69. 6%)	43 (70. 5%)	0.012 2.155	0.911 0.033
Age (Mean± SD)		71.93± 6.1	69.9±4.2		
Body mass index (Mean± SD)		30.54±4.79	29.79±4.7	0.921	0.359

Demographical characteristics of patients.

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Association Polyépiphysaire and Fibrous Dysplasia

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Ehs Ben Aknoun, Algiers, Algeria.

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Rheumatic Disease and Pregnancy – Experience of a Single Center

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Background. Historically, pregnancy was not deemed safe in women with multisystem rheumatic diseases, either because of the risk of that their condition would deteriorate or because of their medications. This view has changed and current opinion is that with good disease control, careful planning, and combined management, delivery of healthy babies is often possible.
Objective. To evaluate the effect of pregnancy on rheumatic disease and management strategies.
Results. 27 patients were evaluated retrospectively between 2011-2014, focusing on the disease activity, pregnancy complications, and outcomes. 15 had systemic lupus erythematous (SLE), among them 2 cases with secondary antiphospholipid syndrome, 5 had rheumatoid arthritis (RA), 5 had ankylosing spondylitis (AS), 1 idiopathic polymiositis (PM) and 1 primary antiphospholipid syndrome (APS). In most of the cases (11 SLE, 3 RA, 3AS, 1 PM) disease was in remission at the time of conception. Median disease activity at the time of conception was: for RA patients a DAS28 score of 3.6, for SLE patients a SLEDAI score of 4.36, a BASDAI of 5.9 in AS patients. Medication during pregnancy included corticosteroids minimum doses (4 cases), hydroxicloroquine(4 cases), baby aspirin 3 cases, subcutaneous low molecular weight heparin in all 3 APS cases, sulphasalazyne -2 cases (1 RA, 1 AS), one RA patient got pregnant while she was on Rituximab. In 6 cases (2 RA, 2 SLE, 2 AS) pregnancy was not planned. In 2 cases abortion was recommended due to theratogenic treatments (methotrexate – RA patient, azathiopine- SLE patient with recently diagnosed lupus nephritis). Median age at diagnosis was 26.5 years, median age at pregnancy was 30.95 years. In most of the patient a diagnosis of rheumatic disease was established before their first pregnancy (median duration 6.3 years), only 6 cases (4 SLE, 1 RA, 1AS) were diagnosed during pregnancy or in the first 6 months. Obstetric history revealed 10 spontaneous abortion, 1 intrauterine fetal death, 3 intrauterine growth restriction. 22 patients had full-term pregnancy, 5 cases gave birth naturally, and the rest received cesarean section. There was one case of congenital complete heart block that received permanent pacemaker, second birth of a patient that was diagnosed with SLE almost seven years after the pregnancy. Except the congenital block, 6 month follow up of the infants revealed no specific problems There were 7 cases of disease flares: 1 AS, 2 RA, 4 SLE, all of them after giving birth.
Conclusions. With careful planning, most women with inflammatory rheumatological diseases can have successful pregnancies. It is important that conception occur when the disease has been inactive for at least 6 months and while the mother is taking non-teratogenic drugs.
Keywords. Pregnancy, rheumatoid arthritis, systemic lupus, polimyositis, antiphospholipid, treatment.

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Sarcopenia Assessment in Patients with Type 2 Diabetes Mellitus

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Background. Diabetes mellitus is a metabolic disorder resulting from a defect in insulin secretion, insulin action, or both.
Objectives. The aim of our study was to investigate changes in muscle mass with especially the comparison between people DM patients.
Methods. This randomized, prospective, controlled, single blind study was conducted in Physical medicine and Rehabilitation department of Bezm-i Alem Vakıf University, faculty of Medicine. The patient group individuals taken from patients with type 2 diabetes mellitus. The patients were between the ages of 40 and 65 included in this study. Body composition of the subjects was measured by Bioelectrical impedance analysis method. Muscle mass distribution of subjects with Skeletal muscle index (SMI (%): Diabetic and nondiabetic patients evaluated with using total skeletal muscle mass (kg)/weight (kg) x100) formula.
Results. A total of 126 patients completed the study (63 study group, 63 control group). The clinical and demographic characteristics of the patients and the healthy controls are listed in Table I. The mean age was 59.31±8.17 years. The mean disease duration was 11.42±2.82 years. The most important finding of our study in patients with type 2 diabetic SMI values were significantly lower than the control group. In addition, BMI, fat mass and fat percentage was significantly higher in type 2 diabetic patients.
Conclusion. In conclusion, type 2 diabetes is associated with the excessive loss of skeletal muscle mass in older adults. Older adults with undiagnosed diabetes are at particularly high risk for the loss of skeletal muscle mass.
Keywords. Sarkopenia, type 2 diabetes mellitus, skeletal muscle mass.

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Integration of Electronic Devices and On-Line Media in the Care of Rheumatology Patients. A Binational Comparative Study

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Background. The numerical revolution has affected all areas of life and has impacted all professions, changing our habits and facilitating many tasks of daily life. The usage of information and communication technology in medicine is essentially determined by the development of Internet and had boomed during the last years.
Objectives. To evaluate the degree of integration of information and communication technologies (ICT) in daily life practice of rheumatology, in two rheumatologic populations: a leading country in ICT (USA) and an African-Arab country (Algeria).
Methods. Survey by on-line questionnaire sent to rheumatologists, dealing with the various aspects of integration of ICT in the daily professional life. The questionnaire has included simple questions (simple-choice questions, multiple-choice questions, quick answers of 3-4 words). The questionnaire has been sent during March 2013 to 131 Algerian rheumatologists and 25 American Rheumatologists. It included 9 items and the average response time was estimated at 3 minutes. Results: An answer was obtained from 67 Algerian rheumatologists and 16 American rheumatologists (overall response rate: 53.2%). Responses are detailed on the table.
Conclusions. The results of our questionnaire show a significant penetration of ICT, either among American or Algerian rheumatologists. The main difference lies in the nature of the patient's file, mainly electronic in the USA and printed in Algeria; the explanation to that is the fact that this aspect does not depend on the physician's will but on the overall public health policies.
Keywords. Electronic devices, patients care, rheumatology.

Table I. Comparative results between Algerian and American rheumatologists.

	Algerian rheumatologists	American rheumatologists
Sent questionnaires	131	25
Received questionnaires	67	16
Response rate	51.1%	64,0%
Main resources for medical information:		
- Electronic	86%	94%
- Printed material	14%	06%
Main electronic resources	-em-consulte.com - rhumato.net - sciencedirect.com	- uptodate.com - pubmed.org - googlesearch.com
Usage of a smartphone/tablet at work	55%	56%
E-mail available for patients	27%	31%
Social media possible to the patients to communicate with the physician	14%	0%
Electronic medical/health record for routine clinic charting	30%	81%

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How Necessary is Actually Antistreptolysin O (ASO) Test in Clinical Practice?

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Background. ASO is still one of the most unnecessary laboratory test in many developing countries.
Objectives. In this study, the necessity of ASO test have been estimated "completely appropriate", "may be associated" and "unrelated" in two tertiary education and research hospitals of middle Anatolian region of Turkey.
Methods. The hospital information database system was used to collect data of patients were ordered ASO. Age, gender, ICD-9/10 clinical diagnostic codes, the ordering department and ASO, erythrocyte sedimentation rate, hemoglobin, C-reactive protein (CRP), rheumatoid factor (RF) and throat culture results were documented for 2 months period of winter. The diagnosis of acute rheumatic fever (ARF), post-streptococcal reactive arthritis, acute carditis/rheumatic heart valve disease and chorea have been regarded as "completely appropriate"; tonsillitis, pharengitis, upper respiratory tract infections, rhinitis, lymphadenitis, erysipelas, scarlet fever, impetigo, glomerulonephritis, arthralgia, acute arthritis, erythema nodosum, Henoch-schonlein purpura, leukocytoclastic vasculitis and cutaneous polyarthritis nodosa as "may be associated", and the other diagnoses were classified as "unrelated" for ASO test.
Results. Ankara Numune Education and Research hospital (ANERH) has 249 polyclinic rooms and 1140 inpatients bed capacity while Hitit University Çorum Education and Research Hospital (HUÇERH) has 111 polyclinic rooms and 700 inpatients bed capacity. In ANERH and HÜÇERH, 2635 and 2025 ASO tests were ordered in two months period, respectively. Only 16 of the ASO tests in ANERH and 9 in HÜÇERH (<1% for both) were ordered in "completely appropriate" indication. 20.1% of the ASO tests in ANERH and 19% in HÜÇERH were ordered in "may be associated" indication. 79.3% of the ASO tests in ANERH and 80.5% in HÜÇERH were ordered in "unassociated" diagnosis. In both of the hospitals ASO tests were mostly ordered by unassociated departments (respectively general surgery, orthopedics, neurology, dermatology and check-up out-patient clinic) with unassociated diagnosis (Table I).
Conclusions. The main indication of ASO test is to support the ARF diagnosis. Despite ARF has been a rare disease in today, ASO test is still ordered very commonly in Turkey. In this study, we determined that the ASO test in two major tertiary hospitals in Turkey are ordered by irrelevant departments and unassociated diagnosis. Also we found that, CRP and RF test were ordered in 75.7% of the patients of ANERH and 78.1% of the patients in HUH with together the ASO test, as "rheumatism panel". This results suggest that ordering of ASO, CRP and RF analysis together as panel still continues unnecessarily in general clinical practice.
Disclosure of Interest: None declared.
Keywords. ASO test, unnecessary laboratory test, rheumatism panel.

Table I. The first five diagnosis ordered ASO in two months period in ANERH and HÜÇERH.

ANERH		HUÇERH	
Arthralgia	352	Lumbar pain and spine problems	205
General physical examination	274	Arthrosis	177
Abdominal pain	247	Upper respiratory tract infections	147
Thyroid diseases	149	Arthralgia	137
Cerebrovascular diseases	136	Lymphadenitis	135

P-299

Infectious Osteitis: A Retrospective Study of 10 Cases

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Introduction. When infection occurs on solid bone tissue, the problems which arise are to diagnosis the disease early, to find the pathogen, to achieve effective antibiotic therapy at the bone level and to fill the bony defect, We present our experience in the management of 10 cases of bone infection.
Results. This was a retrospective series of 10 cases of infectious osteitis. The mean age was 53 years. The predominance was for man with a sex ratio 8/10. Bone infection was a complication of an anal abscess in three cases, diabetic foot infection in two cases, transurethral prostatectomy, skin infection and myositis in one cases each one. Five patients had diabetes. None patient took immunosuppressive therapy. The time evolution of symptom was 47 days on average. Three patients have fever, eight had pain on pressure of the bone or joint mobilization and one patient had a subcutaneous swelling. 90 % have a biological inflammatory syndrome. Five of them have lytic bone lesions on plain radiographs; one had bank erosion and in four cases plain radiographs were normal. We used CT scan in three cases, MRI in five cases and bone scintigraphy in one case. Germ found was Staphylococcus Aureus in four cases, Pseudomonas Aeruginosa and Echinococcus Granulosus in one case each one. Three patients have got a complication of infectious osteitis as arthritis, sciatica and death due to a septic shock. Nine patients were treated with a combination of antibiotics and in one case Albendazole was used. Two patients underwent a surgical treatment.
Conclusion. The particular aspects of infectious osteitis are due to their frequency, to the prognostic value of underlying diseases, to some complementary investigations (such as scintigraphy, CT scan). The treatment shall take into account not only involved pathogen, but also the penetration of antibiotics into bone and possible toxicity of some antibiotics. The surgical treatment is discussed too. Obviously, infection should be eradicated, but functional impairment must be considered and prevented as much as possible.
Keywords. Osteitis, infectious, scintigraphy.

P-300

The Spectrum of MEFV Clinical Presentations: Evaluation of Children with Vasculitis

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Familial Mediterranean fever caused by Mediterranean Fever gene (MEFV) mutations is a common hereditary autoinflammatory disorder characterized by recurrent febrile attacks and polyserositis. In addition to the classical presentation, there have been reports of vasculitis associated with MEFV mutations.
Objectives. The aim of this study was to evaluate genotypic features of children with MEFV mutation associated vasculitis.
Methods. The medical records of patients with MEFV mutations who were analyzed between 2003 and 2012 in our instructions, were reviewed retrospectively. Children with vasculitis were included in this study.
Results. Out of the 656 children with MEFV mutations, 33 of them have been diagnosed vasculitis. The study included 33 children, 12 females (36.4%), 21 males (63.6%), with a mean age 10.23±4.19 years. Their diagnosis were Henoch-Schonlein purpura in 27, polyarteritis nodosa in 4, Behçet disease in 2.
Eleven of 33 patients (33.3 %) were homozygous (M694V/M694V in 9, V726A/V726A in 1, E148Q/ E148Q in 1), 18 patients (54.5%) were heterozygous (E148Q in 9, M694V in 5, M680I in 1, E148V in 1, M680I in 1), and 4 patients (12.1 %) were compound heterozygous (E148Q/M694V mutations in 1 and L110P/E148Q mutations in 1).
Conclusions. These data suggest that mutations of the MEFV gene may be predisposition to various diseases, such as vasculitis. Studies of larger cohorts would be able to examine better the relationship of vasculitis subgroups, clinical findings, and MEFV mutations.
Keywords. MEFV mutations, children, vasculitis.

P-301

Nutritional Evaluation of Patients with Disk Hernia

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Background. Disc hernia (DH); one or more components of the intervertebral disc posterior or posterolateral direction of displacement, as a result of herniation nervous tissues and to apply pressure in this region vertebra impair the mechanical and neurological functions are associated with a clinical condition. Environmental, genetic, hormonal, mechanical, degenerative, and more by the interaction of many factors unknown is a disease thought to develop. Among the environmental factors involved in the etiopathogenesis of dietary habits and trends of these patients, follow-up and treatment of the disease remains uncertain in terms of significance.
Objectives. Our aim in this study of patients with disk hernia degeneration degree (MODIC) of eating habits and these habits is to investigate the effect.
Methods. In this context Bezmialem Foundation University of Physical Medicine and Rehabilitation outpatient clinic history and physical examination in addition to the direct radiography and / or computed tomography and / or myelography and / or EMG and / or magnetic resonance imaging method with at least one to be supported diagnosed 41 DH patients diagnosed nutrition dealing with the situation by creating forms were filled with face to face interviews. This form of patient demographics, disease activity, smoking and alcohol use, concomitant diseases, disease duration, and nutritional status was filled a questionnaire about.
Results. In cases of water consumption, salt, fast food, eggs, milk, yogurt, cheese, wheat, cereal, whole wheat bread, white bread, butter, margarine consumption was recorded Patients with food consumption was no correlation between the MODIC(p>0.050).
Conclusion. Further studies with comparison groups and larger samples are needed to explore the promising results of this study before any cause and effect relationship can be determined.
Keywords. Disk hernia, diet, disk hernia diet.

P-302

Coeliac Disease in Patients with İdiopathic Uveitis

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Background. Coeliac disease (Gluten sensitive enteropathy, GSE) is a chronic inflammatory disease in which immunological reaction develops against gliadine found in cereals. The GSE effects 1% of population. Although the disease usually shows gastrointestinal symptoms like diarrhea, malabsorption, weight loss it sometimes presents with extraintestinal symptoms, like ataxia, motor weakness, dermatitis herpetiformis. Moreover, significant portion of the patients are asymptomatic. Uveitis is a condition that is characterized by inflammation of inner layers of eye that might threaten vision. The most common underlying etiology of uveitis are rheumatologic and infectious diseases. However, not infrequently, the underlying cause cannot be determined and the disease is described as idiopathic uveitis.
Objectives. In this study, the frequency GSE in patients with idiopathic uveitis was investigated.
Methods. Consecutive patients followed with diagnosis of idiopathic uveitis in our clinic were included for the study. Patients with Behçet uveitis were taken as the control group. Serum antigliadin antibodies (IgG and IgA) were analyzed for detection of the disease. Anti-transglutaminase antibodies were studied for confirmation of the diagnosis in the antibody positive patients. Duodenal biopsies were obtained when necessary.
Results. 45 idiopathic uveitis patients (15 men, 30 women, mean age 43,9+13,0) and 15 Behçet uveitis patients (8 men,7 women, mean age 36,9+10,8) were included. Antibody positivity was detected in 7 (15.5%) idiopathic uveititis patients and 1 (6,6%) Behçet uveitis patient. In the advanced search, anti-transglutaminase antibodies were detected in 2 patients of idiopathic uveitis group and none of Behçet uveitis group. GSE findings were observed in the intestinal biopsy of one of the idiopathic uveitis patient. Interestingly, in this patient, uveititis regressed with the appropriate diet for GSE and anterior uveitis attacks entered remission
Conclusions. GSE, although not frequent, could be an underlying factor in patients with idiopathic uveititis and should be considered, especially when there are other clinical clues that suggests GSE. This is especially important because these patients could benefit appropriate diet. Further larger studies are needed to better understand wide variety clinical associations of GSE.
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Keywords. Coeliac disease, idiopathic uveitis, Behçet, diet.

P-303

The Pre and Post Evaluation of Chronic Temporomandibular Joint Pain in a Group of Young Females

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Objective. The aim of this study was to evaluate the self-reported behavioral factors/parafunctions (clenching, bruxism, chewing gum, chew food on one side only) and to compare chronic pain in a group of young female patients with temporomandibular disorders.
Methods. A standardized Research Diagnostic Criteria for TMD (RDC/TMD) assessment was performed on 14 young female patients between 19-30 year old with TMDs. All the patients are evaluated two times with RDC/TMD questionnaire in one year interval, changes in chronic pain and degree of mouth opening was recorded. Recommendations about parafunctional habits are made in the first examination. Statistical evaluation was done by SPSS for Windows 17.0.
Results. A statistically significant difference was seen between reduction of oral parafunctions and chronic pain (graded according to RDC/TMD-Axis II) (Chi-square test, p=0,028); no statistical significant difference was found between reduction of oral parafunctions and degree of mouth opening (Chi-square test, p=0,07).
Conclusion. Within the limits of this study evaluating a small number of patients, it was concluded that behavioral factors and parafunctions were associated with the degree of chronic pain.
Keywords. Temporomandibular Joint Pain, Temporomandibular disorder, Temporomandibular.

P-304

Psychopathology and Personality in Parents of Children with Brucellosis

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Objectives. The aim of our study is to determine the psychological state of mothers and fathers of children with brucellosis
Material and Methods. Study June 2013 - September 2013 in the province of Agri Patnos between physical therapy and rehabilitation in the state hospital, children, infection with brucellosis being treated at outpatient clinics and psychiatric patients and normal healthy patients were included. Scans of patients to psychiatric symptoms Symptom Checklist (SCL-90-R) were asked to complete the form.
Results. Children who were referred to our center with ages ranging from 14 to seven consecutive 34 patients and 40 healthy controls were enrolled in the study. To our study results of surveys of the SCL-90-R somatization according to the mother, the mother of obsession, mother depression, anxiety, mother, mother's anger scores above 1.50 were obtained as high levels of symptoms. Other parameters were normal. Brucellosis outside with a group of healthy control group

there were significant differences between the father anger parameters (p<0.05).
Conclusion. This type of chronic disease, parents of children in the forward-looking identified because of the psychological state of permanent and long-lasting psychological sequelae identified. Early psychological support can be offered for this.
Keywords. Psychopathology, Brucellosis, scl-90r.

P-305

Effects Of Vitamin D Treatment on Electromyographic Activity of Lower Limb Muscles in Patients with Vitamin D Deficiency

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Background. Deficiency in vitamin D affects skeletal muscle function. Muscle weakness occurs in the proximal limb muscles.
Objectives. Aim of this study was to determine effect of vitamin D treatment on electromyographic activity of proximal and distal lower limb muscles in patients with vitamin D deficiency.
Methods. The present study was a prospective open label clinical study. Ethical approval was obtained from the Institutional Review. All procedures were explained prior to enrollment, and all participants provided written informed consent. Thirty three premenopausal women with vitamin D deficiency were included in this study. Surface EMG recordings were obtained from the soleus and gluteus medius muscles during maximal voluntary contraction. Root-mean-square values (RMS) were calculated from the filtered surface EMG signal. All patients treated with calcium (1200 mg/day for 2 months, per oral) and vitamin D3 (300.000 IU/week for 1 month per oral). Serum level of 25(OH) vitamin D, parathormone and RMS value of m.gluteus medius and m.soleus were measured before and after treatment.
Results. The mean of RMS value of m.gluteus medius, serum level 25(OH) vitamin D and parathormone showed a significant change after treatment. The mean increase in serum 25(OH) vitamin D level was 1413.6%; the mean decrease in parathormone was -60.9% after treatment. A mean increase in RMS value of m.gluteus medius was 32.5% (p=0.017). But no significant change in RMS value of m.solues was found. Multiple linear regression analysis indicated that change in the parathormone level was an important predictor of change in the RMS value of m.gluteus medius (R^2=0.318, F=14.93, p=0.001, Durbin-Watson:1.62). The negative regression coefficient (B=-0.591) showed an inverse correlation between change in RMS value of m.gluteus medius and change in parathormone serum level (Fig.).
Conclusions. Electromyographic analysis in patient with vitamin D deficiency suggests that vitamin D deficiency affects proximal limb muscle function; Vitamin D and calcium treatment improves proximal limb muscle activity; Vitamin D may affect skeletal muscle function via parathormone.
Keywords. Electromyography, myoelectrical activity, osteomalasia, vitamin D.

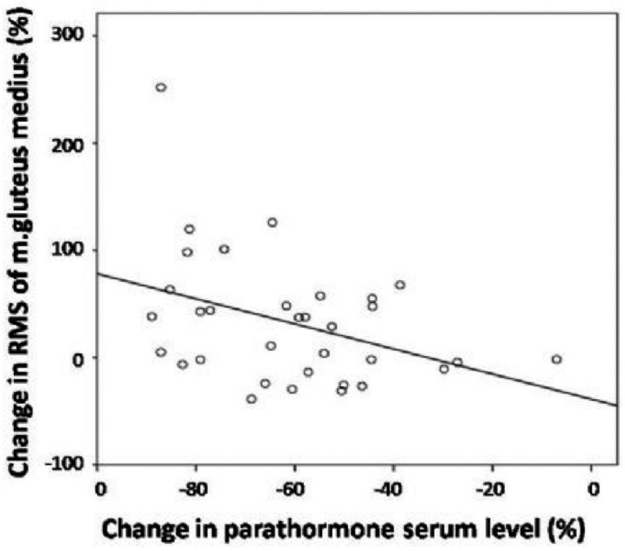

Fig. 1. Correlation between the change in RMS value of m.gluteus medius and the change in parathormone serum level.

P-306

Complementary and Alternative Treatment Methods in Rheumatic Diseases

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Background/Purpose. The aim of the study was to determine the kind of traditional practices used for the rheumatic diseases, the extensiveness of their usage in current setting and the sociodemographic characteristics of patients using complementary and alternative medicine (CAM) in middle Anatolia.
Methods. Four hundred and forty volunteered patients (more than 40% of the patients were diagnosed as osteoarthritis) with chronic rheumatological diseases were included in the study and were requested to complete a 36-item questionnaire including the types of the CAM, the reason of the CAM usage, where they got recommendation, the benefits and side effects, the timing and duration of CAM usage, whether they have stopped the medical treatment during CAM usage, the cost of the CAM besides the sociodemographic variables of the patients.
Results. 49.5 % of the patients were using CAM. Patients with higher income and educational status more frequently sought CAM. The usage was within the first year of the disease in 46.5 % of the cases. 75.6 % of the patients used CAM for the hope of cure. Herbal medicine was the most commonly (58.1%) preferred method. CAM was most frequently used by the recommendations of family and colleagues of the working patients and 2.8 % was commenced on CAM by a clinician. Of the patients using CAM, 41% reported benefit while 5.5% reported adverse effects. It was also determined that medical therapy had been withdrawn in 23.5%. The average cost of CAM was 48 dollars per patient.
Conclusion. It is evident that CAM usage is common in patients suffering rheumatological diseases in middle Anatolia. Understanding the nature of CAM and evidence based studies are mandatory for rheumatologists not only for they may encounter some possible side effects but also these traditional medications may have substantial benefits.
Keywords. Complementary Medicine, Alternative Treatment, Rheumatic Disease.

P-307

Uncommon Coexistance of Acromegalia and Bilateral Sacroiliitis

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P-308

Low Back Pain Frequency and Effect of Back Education and Exercise Program on Pain and Functional Capacity in Mothers of Children with Cerebral Palsy

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Background. Because motor and mental functions are affected and due to other comorbit problems, there can be complex limitations in self-care activities in CP cases. For this reason they need close and long-term care. There are a lot of studies suggesting that the mother, assuming primary career of child, is affected physically and psychologically.
Objectives. Aim of this study is to evaluate low back pain frequency in mothers of children with CP and education and exercise programs, which intend to prevent low back pain, on functional capacity and pain in those with low back pain.
Methods. 82 Mothers with CP children were included in the study. Age, education, occupation, height, weight, number of children, presence of low back

pain of each case and age of CP child, weight, height, BMI (kg/m²) were recorded. Each child was classified with GMFCS (Gross Motor Functions Classification System). Nottingham Health Profile (NHP) and Beck Depression Inventory (BDI) were applied to all of the mothers. Severity of low back pain was assessed with NRS (Numeric rating scale)(0-10). Oswesty Disability Index (OSW) and Leeds Assessment of Neuropathıc Symptoms and Signs (LANSS) were applied to the cases with low back pain. Techniques of protection of low back and education program including exercises were given to mothers with low back pain. Three months later these cases were assessed again via NRS and OSW.

Results. There was low back pain in all the 39 cases (47,56 %) out of 82. No statistically significant relation was determined between the GMFCS level of children and existence of low back pain in mothers (*p*:0,412). NPH pain, NPH sleep and NPH physical activity scores were found statistically high when groups with and without low back pain were compared (*p*:0,000, *p*:0,049, *p*:0,000).When NRS and OSW scores of 34 cases were compared, who carried out recommendations and did exercises, statistically significant recovery was found at NRS and OSW scores in the interview 3 months later (*p*<0,002, *p*<0,003).

Conclusion. As a conclusion; Low back education and exercise programs provided positively effect on low back pain and functional limitation. We consider that controlled studies, investigating effect of direct techniques to decrease physical burden and including more cases, will be a guide for prevention of low back pain.

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Keywords. Low back pain, cerebral palsy, Oswestry Disabilite Index.

P-309

Bone Mineral Density in Early Psoriatic Arthritis

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Objective. to investigate bone mineral density (BMD) in patients with early PsA (ePsA).

Methods. 29 (M. /F. – 11/18) DMARD-naïve patients (pts) with active new onset ePsA, according to the CASPAR criteria, mean age 38.2 [29; 49] years (yrs) [1 M. out of 11 was over 50 yrs, 10 M. out of 11 was under 50 yrs, 12 out of 18 F. was pre-menopausal, 6 out of 18 F. was post-menopausal], PsA duration 7 [4; 24] months (mon.), Psoriasis (PsO) duration 60.8 [10; 84] mon., mean body mass index (BMI) 27.4 [21.7; 30.9] kg/m2 were enrolled. All pts underwent a clinical examination - Tender Joint count (TJC78), Swollen Joint Count (SJC76), patient pain VAS, patient global disease activity VAS, physician's global disease activity VAS, HAQ, DAS, DAS28, SDAI, C-RP (mg/l), ESR (mm/h) and dual energy X-ray absorptiometry (DEXA) in the lumbar spine (LS) (LI-LIV), femoral neck (FN), total hip (TH), distal forearm (DF) non-dominant hand by Hologic «Discovery A». DEXA by Z-score for M. under 50 yrs./pre-menopausal F. and T-score for M. over 50 yrs./post-menopausal F. were performed. T (Z) >-1.0SD as normal value, -2.5< T (Z) <=-1.0SD as osteopenia, T (Z) <= -2.5SD as osteoporosis and T (Z) <=-2.5SD + fractures as severe osteoporosis were considered. M±SD, Me [Q25; Q75], Spearman's correlation coefficient (R) performed. All *p*<0.05 were considered to indicate statistical significance.

Results. In all pts the mean BMD of the LS (LI-LIV)/ FN / TH / DF were -0.6 [-1.3; 0.3] SD/ -0.5 [-1.3; 0.1]/-0.2 [-0.9; 0.5]/-1 [-1.5; -0.5] accordingly. The detection rate of the BMD's normal value, osteopenia and osteoporosis are shown at the Table I.

Table I.

Region of the skeleton	LS (LI-LIV)	FN	TH	DF
Normal value, pts (%)	20 (69%)	20 (69%)	22 (75,9%)	15 (51,7%)
Osteopenia, pts, (%)	8 (27,6%)	9 (31%)	7 (24,1%)	12 (41,4%)
Osteoporosis, pts, (%)	1 (3,4%)	0	0	2 (6,9%)

The detection rate of the BMD's normal value, osteopenia and osteoporosis.

The mean DAS/ DAS28/ SDAI was 3.97 [3.18; 4.66]/ 4.29 [3.98;4.73]/ 21.34 [18.72; 23.62] accordingly. We found significant correlation between BMD of the LS (LI-LIV), weight (R=0.38) and BMI (R=0.50); BMD of the FN, weight (R=0.49) and BMI (R=0.44); BMD of the TH, weight (R=0.24) and BMI (R=0.53); BMD of the DF and BMI (R=0.51).We found significant negative correlation between BMD of the TH and SDAI (R=-0.39). Decrease of BMD detected in 7 (58%) out of 12 pre-menopausal F. and in 5 (50%) out of 10 M. under 50 yrs.

Conclusions. Decrease of BMD can be found at an early stage of PsA in half of pts that are associated with PsA activity.

Keywords. Osteoporosis, bone mineral density, early psoriatic arthritis.

P-310

Pregnancy Outcomes in Patients with Rheumatoid Arthritis and Systemic Lupus Erythematosus

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Background. It is known that patients (pts) with autoimmune diseases have an increased risk of complications during pregnancy and its adverse outcomes.

Objectives. Compare the outcomes of pregnancy in patients with rheumatoid arthritis (RA) and systemic lupus erythematosus (SLE). Compare them with population data.

Methods. 82 singleton pregnancy outcomes in 77 pts: 34 pts(38 pregnancies) with RA (ARA, 1987), 43 pts (44 pregnancies) with SLE (ACR, 1997) were analyzed. The pts were prospectively followed in Nasonova Research Institute of Rheumatology in 2010 2013 during pregnancy and after childbirth, and signed informed consent for the scientific use of this information. Patient characteristics are presented in Table I.

Table I. Patient characteristics.

	RA (n=38)	SLE (n=44)	*p*
Age, Me[25%;75%] y.o.	29 [26;32]	28 [26;32]	>0,05
Disease duration, Me[25%;75%] y.	7,5 [4;16]	5,5 [2,5;10]	0,01
Received glucocorticoids (GC) per os during pregnancy, n (%)	27 (71)	43 (97,7)	0,002
GC dose per os in III trimester, Me [25%;75%] mg/day	10 [5;10]	1 [10;17,5]	<0,0001

Table II. Pregnancy outcomes in the research group.

	RA (n=38)	SLE (n=44)	*p*	in the Russian population (in the same period)
Delivery time, Me[25%;75%] week	39 [38;40]	37 [36;39]	0.01	
Premature birth, n (%)	5 (13.2)	12 (27.3)	>0.05	
CS, n (%)	20(52.6)	25 (56.8)	>0.05	229.2 per 1000 births (p<0.001)
Live newborns (n)	38	41	>0.05	
Newborns weight, Me[25%; 75%] sm	3276[2800;3570]	3085[2580;3450]	>0.05	
Newborns height, Me[25%; 75%] g	51[49;52]	50[48;52]	>0.05	
Apgar scores 1 min, Me[25%; 75%]	8[8;8]	8[7;8]	>0.05	
Apgar scores 5 min, Me[25%; 75%]	9[8;9]	9[8;9]	>0.05	
Low birth weight (<2500g),n (%)	3(7.9)	7 (15.9)	>0.05	5,7% (p=0.6 for RA, p=0.004 for SLE)
Pregnancy losses at less than 28 weeks, n (%)	0	3 (6.8)	>0.05	

Results. The delivery time in SLE patients was lower than in pts with RA (*p*=0.01). The cesarean section (CS) rate and neonatal anthropometric indices in pts with SLE and RA did not differ. In the research group (RA + SLE) CS rate

(p<0.001) and the frequency of low birth weight (p=0.004) were higher than the average population figures (Table II).
Paid attention that delivery date inversely correlated with oral GC dose both at the time of conception (r =-0.34, p=0.002), and prior to delivery (r = -0.44, p<0.0001)
Conclusion. Pts with RA and SLE have an increased risk of the CS and low birth weight compared with the mean population data. Childbirth in pts with SLE occurred earlier than in pts with RA. Reducing of the delivery time may be associated with concomitant GC therapy.
Keywords. Rheumatoid arthritis, systemic lupus erythematosus, pregnancy outcomes.

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Comparison of Tuberculin Skin Test, Quantiferon-TB Gold Test and T-Spot.TB Test in Patients with Rheumatic Diseases Planned to Receive TNF-α Blocking Agents for the Identification of Latent Tuberculosis Infection

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Background. One of the major complications in therapy with tumor necrosis factor-α (TNF) blocking agents is tuberculosis infection. Therefore, it is very important to identify latent tuberculosis infection in patients who planned to receive anti-TNF agents (1).
Objective. We aimed to compare Tuberculin Skin Test (TST) and Quantiferon-TB GOLD test and T-SPOT.TB test as new diagnostic tools that can be used in patients with rheumatic diseases planned to receive TNF-α blocking agents for the identification of latent tuberculosis infection in this study.
Methods. In this study, 49 patients (20 male, 29 female) with rheumatic diseases (27 of rheumatoid arthritis, 22 of ankylosing spondylitis) planned to receive TNF-α blocking agents were analyzed. Age, sex, comorbidities, medications, number of BCG scar and TST, QuantiFERON-TB Gold and T-SPOT.TB test results were determined in the evaluated patients.
Results. The average age was 47.87 ± 11.16 (23-71 years). In one patient (2%) had no BCG scar, the remaining 48 patients (98%) had BCG vaccination and the mean steroid dose was 6.79 mg prednisolone. The prevalence of latent tuberculosis infection for TST was 61.2%, for QuantiFERON-TB Gold test was 14.3% and for T-SPOT.TB test was 32.7%. There was no statistically significant difference between the results of number of BCG scar and TST (p=0.176), Quantiferon TB-Gold test (p=0778) and T-SPOT.TB test (p=0.612). Considering all patients, Quantiferon TB-Gold test specificity was 88.2%, sensitivity was 17.2% and the T-SPOT.TB test sensitivity was 32.1%, specificity was 56.3%. Evaluation of subgroup of the study was as follows; Evaluation of sub-group of the study is as follows; QuantiFERON-TB Gold test sensitivity was 15.4%, specificity was 83.3% and the T-SPOT.TB test sensitivity was 57.1%, specificity was 60% according to TDT in patients with RA. Evaluated in patients with a diagnosis of AS, Quantiferon TB-Gold test the sensitivity was 18.8%, specificity was 100% and sensitivity of T-SPOT.TB test was 7.1%, specificity was 50%. There was low agreement between TDT and Quantiferon TB-Gold (κ=0.043) and the T-SPOT.TB test (κ=0.1). There was no statistically significant relationship between steroid therapy and negative test results.
Conclusion. Interferon-γ-based tests carrying no common antigens with BCG was previously not affected by vaccination. Tests can be used in patients with rheumatic diseases planned to receive TNF-α blocking agents for the identification of latent tuberculosis infection depending on the sensitivity and specificity. However, more studies are needed to determine the actual sensitivity and specificity.
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Keywords. Connective tissue disease, Latent tuberculosis infection, Tumor necrosis factor-α blocking agents, Tuberculin Skin Test, Quantiferon TB-Gold test, T-SPOT.TB test.

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Phantom Clavicle: Case Report

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Ocular Toxicity Induced by Antimalarial Medications; Necessity for Regular Screening

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Background. Since the early 50's, chloroquine (CQ) and hydroxychloroquine (HCQ) have been widely used for the treatment of rheumatoid arthritis and other similar inflammatory diseases. Ocular toxicity of HCQ and CQ including irreversible retinopathy is rare, but it has extremely high potential risk. Although the exact incidence of retinopathy is not clear but the probability of occurrence is 3-4% in patients taking these drugs for at least 10 years. Despite this, there is no general consensus on intervals and regularity of eye screening in patients treated with antimalarials.
Objectives. In this study, we investigated the incidence of ocular complications in our patients with rheumatoid arthritis (RA), SLE (systemic lupus erythematosus) or mixed connective tissue disease (MCTD) receiving HCQ or CQ and the rate of false positive results of routine eye examination.
Methods. In this retrospective study medical records of 598 patients with RA, SLE or MCTD taking antimalarial medications were evaluated. Individuals' demographic characteristics, duration of disease and treatment and also presence of other co morbidities were documented. The patients had undergone routine ophthalmological assessment. In case of ocular involvement, second ophthalmic examination was conducted by another expert ophthalmologist to ensure the routine ocular assessment.
Results. In this study 124 (20.7%) patients were male and 474 (79.3%) were female. Age of individuals was 50.6±14.6 years. Duration of treatment was 22.8±22 months for HCQ 200 mg, 15.4±15.8 months for HCQ 400 mg and 7.4±14.4 months for CQ 150 mg. No ophthalmic abnormality was detected in 515 (86.1%) subjects but ocular complications were diagnosed in 83 cases (13.9%) in the routine ophthalmic examination. Among these patients, Ocular toxicity of antimalarials was ruled out in 49 (8.2%) subjects in the second ophthalmological assessment. Therefore eye problems were confirmed in 34 (5.7%) cases. Patients with eye complications were significantly older than individuals without ocular toxicity (p=0.03). Ocular involvement was not significantly different between patients with RA, SLE or MCTD (p=.01) and between patients with and without comorbidities (p=0.7). Meanwhile duration of the underlying disease and also treatment with various antimalarial agents were not significantly different between patients with and without ocular toxicity (p>0.05).
Conclusions. The findings indicated a considerable rate of ocular complications among patients receiving antimalarial drugs even after exclusion of some of the diagnosed cases in the second ophthalmic examination. Thus despite the controversial recommendations about routine screening for ocular complications resulting from treatment with antimalarial medications, we recommend regular screening to detect cases of ocular toxicity in all patients receiving these drugs.
Keywords. Ocular toxicity, Antimalarial, Screening.

P-314

Comparison of the Different Pain Assessment Scales Used in Adult Patients Seen at the Philippine General Hospital Rheumatology Outpatient Department

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Background. Valid and reliable assessment of pain is essential in the management of rheumatologic conditions. Standardized pain assessment scales have been developed and used in clinical trials, but remain underutilized in clinical practice.
Objective. To evaluate the use of the different pain assessment scales: Numeric Rating Scale (NRS), Verbal Descriptive Scale (VDS), Visual Analog Scale (VAS) and Wong Baker Face Scale (FACES) among adult patients with musculoskeletal pain seen in a Rheumatology Out-patient Clinic in a tertiary government hospital in Metro Manila, Philippines.
Methods. This is a cross sectional study of adult patients with symptoms of musculoskeletal pain seen in a rheumatology out-patient clinic. We collected data on demographics and disease characteristics. The patients answered the different pain assessment scales and ranked them based on ease of use and preference. We checked for correlation of results of the different pain assessment scales using Spearman correlation.
Results. Ninety- four patients are included in this study. Eighty- one percent are females, with mean age of 52 (± SD 14.12) years old. Majority (73%) have low level of education. Forty-one percent have rheumatoid arthritis, 21% have osteoarthritis and 12% have gout. NRS is preferred and ranks easiest to use by 41.5% of patients. FACES is a close second; preferred by 39.4% and considered easy to use by 36.2% VAS ranks last on over-all preference and ease of use. On subgroup analysis, most male patients preferred the VDS while those with low education preferred FACES. The pain score obtained using NRS was significantly correlated with VDS, VAS, and FACES (p=<0.005).
Conclusion. The Numeric Rating Scale is a validated tool that is easy to use and preferred by patients. The Wong Baker Face Scale is a good alternative tool if the patient has difficulty with the NRS. We recommend the use of these pain scales in clinical practice in the Philippines to standardize the assessment and monitoring of pain among patients with rheumatic conditions.
Keywords. Pain assessment scales, rheumatologic conditions, numeric rating scale, verbal descriptive scale, visual analog scale, wong baker face scale.

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Retroperitoneal Fibrosis, IGG4-Related Diseases and Cardiovascular Fibrosclerosis

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Correlation Among Psychological Status and Pain, Disability and Quality of Life in Patients With Subacute or Chronic Low Back Pain

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Aim. Low back pain is an extremely common problem leading disability and considerable healthcare expenditure. The objective of the present study was to investigate the relationship between psychological status and the degree of pain, disability and quality of life in Turkish patients with subacute/chronic low back pain.
Materials and Methods. One hundred and twenty patients with subacute/chronic low back pain (male: 73, female: 47) were included in the present study. The demographic characteristics of the subjects were recorded. A Visual Analogue Scale (VAS) was used for assessing current pain intensity of low back. Disability and Quality of life were evaluated with the Oswestry Low Back Pain Disability Index (ODI) and Short Form 36 (SF-36) respectively. Hospital anxiety (HAD-A) and depression (HAD-D) scale was used to evaluate psychological status of the patients.
Results. The mean age was 41.9±21.1 years. The mean disease duration were 50.6±79.1 months. Mean values of HAD-A, HAD-D, Oswestry disability scale, VAS, SF-36 Physical component summary scale (SF-PCS), SF-36 Mental component summary scale (SF-MCS) were 7.2±3.7, 6.8±3.9, 22.4±8.5, 51.2±23.9, 36.7±8.1 and 43.3±10.1 respectively. HAD-A and HAD-D were significantly correlated with Oswestry disability scale, VAS, SF-PCS, SF-MCS (Table 1).
Conclusion. The results of this study showed that depression and anxiety were moderately correlated with disability and quality of life in Turkish patients with subacute/chronic low back pain.
Keywords. Depression, Anxiety, Low back pain, Quality of life.

Table I. The correlation table of HAD and VAS, Oswestry disability scale, and SF-36.

		HAD-A	HAD-D
VAS	r	0.385	0.324
	p	0.000	0.000
Oswestry Disability Scale	r	0.450	0.460
	p	0.000	0.000
SF-PCS	r	-0.341	-0.400
	p	0.000	0.000
SF-MCS	r	-0613	-0.512
	p	0.000	0.000

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Cutaneous Manifestation of Systemic Lupus Erythematosus [SLE], Correlation with Specific Organ Involvement, Specific Auto Antibodies, Disease Activity and Outcome

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Cutaneous lesions are important as a diagnostic aid as these account for 4 out of 11 revised American Rheumatism association criteria for disease classification aim of study; estimation cutaneous manifestation of systemic lupus erythematosus, correlation with disease activity, immunology test, specific organ involvement and outcome patients and method prospective study (43). Patients diagnosed as systemic lupus erythematosus (sle) according to American College Of Rheumatology (ACR), from registration file of rheumatology clinic- 7th October -hospital, these patients were studied clinically for presence of cutaneous manifestation, and use immunology test and use sledai, the data are analyzed statistically. Study period; June 2008-December 2010 setting; Rheumatology Clinic 7th October-hospital.
Result. Cutaneous manifestation of systemic lupus erythematosus (74.4%) and most patients have butterfly rash (48.8%), photosensitivity (41.9%), acute cutaneous lupus erythematosus (scle) (32.6%), discoid lupus (20.9%) out of which preceding development of sle (4.6%), nail lesions (16.3%), alopecia (23.3%), lupus profundus (2.3%), oral-nasal ulcer (37.2%), raynaud phenomenon (16.3%), livedo reticularis (9.3%), telangiectasias (4.6%), purpuric rash (23.3%) and urticarial lesion (2.3%). Cutaneous manifestation of systemic lupus erythematosus are association with disease activity (97.7%),cutaneous manifestation of systemic lupus erythematosus are association with musculoskeletal (msk) (62.8%), renal disease (27.9%), hematologic disease (23.3%), serositis (9.3%), neurologic disease (14%), (31.3%) and cardiac disease (9.3%), cutaneous manifestation of systemic lupus erythematosus are association with positive Ana (90.3%) and negative Ana (9.3%), positive dsDNA (74.4%), positive anti-Ro (69.8%), positive anti-La (9.3%), positive Anti-Sm (48.8%),and positive Anti-Rnp (39.5%%). outcome of cutaneous manifestation of systemic lupus are alopecia (23.3%), pigmentation (25.6%) and skin atrophy and scarring (27.9%).
Conclusion. The most cutaneous manifestations are epidermal lesion then mucocutaneous lesion then vascular lesion, are associated with disease activity, and associated with high titer auto antibodies
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Keywords. Cutaneous Manifestations, Systemic Lupus Erythematosus, Disease activity, Auto antibodies

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Application of Calcitonin in Patient with Gonartrosis After Arthroscopy and Microfracture Surgery of the Knee Joint

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Background. Gonarthrosis is the most wide spread joint disease. Its severity determines the progression of disability. Using microfracturing in zones with significant cartilage defect is a well known procedure in the orthopedic practice. It allows to postpone disability and provide a better quality of life for the patient. Under study: 51-year woman in menopause, diagnosed with gonarthrosis in relation to a lesion of the posterior horn of the medial meniscus of the left knee. MRI study also showed bone marrow oedema in the medial tibia. During arthroscopy, removal of the medial meniscus was performed with microfracturing surgery of the medial articular surface of the femor. Despite of the rehab pain in the medial tibia was persistent and motion limitation of the knee was also present. Due to the lack of effect of monotherapy with Flamexin 20 mg daily, Calcitonin / Neocalcin nazal 200E / 1 dose per day was also included for a period of three months.
Results and Conclusion. The application of Calcitonin , for three months significantly improved pain syndrome. Movements in the knee joint and functional capacity fully recovered. Calcitonin is suitable for treatment in cases of microfracture surgery as a therapeutic procedure, especially in postmenopausal women and posttraumatic conditions with proven bone pain.
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Key words. Gonarthrosis, microfracture surgery, treatment with calcitonin.

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Assessment of the Genetic Overlap Between Rheumatoid and Psoriatic Arthritis in the Genetic Homogeneous Population of Crete, Greece

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Background. Genome wide association studies (GWAS) have detected a big number of rheumatoid arthritis (RA) susceptibility genes (1) and given the genetic overlap observed between various autoimmune diseases (2), some RA-associated genes were found also to be associated with psoriatic arthritis (PsA) (3).
Objectives. We sought to investigate whether a single nucleotide polymorphism (SNP) of the PLCL2 (rs4535211), CCL21 (rs2812378), REL (rs13017599) and STAT4 (rs10181656) genes, previously reported as RA and PsA susceptibility loci in other populations (3), are also associated with risk for these diseases in Crete.
Methods. A group of 392 RA patients, 126 PsA patients and 521 healthy controls, age- and sex-matched, from the island of Crete, was included in this study. Genotyping of the SNPs under investigation was performed with Taqman primer-probe sets, by using a Real-Time PCR platform (Applied Biosystems 7900). Odds ratios (OR) and 95% confidence intervals (CI) were calculated and the statistical difference in allele distribution was assessed by means of x2 test or Fisher's exact test.
Results. Significant evidence for association with PsA was found for GG genotype and allele G of the rs10181656 SNP of STAT4 gene (p=0.04, OR=4.3, 95% CI 1.01-18.39 and p=0.03, OR=1.46, 95% CI 1.03-2.08, respectively), while no association was found for RA. Interestingly, no association was found to the rest three loci examined, contrarily to previous findings in recent years.
Conclusions. Although PLCL2 (rs4535211), CCL21 (rs2812378), REL (rs13017599) and STAT4 (rs10181656) SNPs were found to confer a remarkable degree of risk for the development of both RA and PsA in various ethnic groups (3), in this report only the genetic association of STAT4 SNP with PsA was confirmed in a Greek population. Importantly, the PsA-associated allele of this SNP is protective in PsA and not risk, as reported recently elsewhere, thus highlighting the importance of comparative studies that include different populations in any attempt to confirm genetic associations detected.
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Keywords. Rheumatoid Arthritis, Psoriatic Arthritis, polymorphism, genetic association.

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