Letters to the Editors

Magnetic resonance imaging of wrist and finger joints distinguishes secondary Sjögren's syndrome with rheumatoid arthritis from primary Sjögren's syndrome with articular manifestations

Sirs,

It is sometimes difficult for clinicians to differentiate the arthritic condition of rheumatoid arthritis (RA) from that of Sjögren's syndrome (SS) (1). We have recently reported the importance of anti-cyclic citrullinated peptide (CCP) antibodies for this differentiation (2). In addition, magnetic resonance imaging (MRI) is also very useful for the recognition of arthritis especially in early arthritis patients who do not show abnormalities by x-ray (3-5). We recruited 29 patients of SS who fulfilled the diagnostic criteria of SS according to the American-European Consensus Group (6) with articular manifestations from the Unit of Translational Medicine, Department of Immunology and Rheumatology, Nagasaki University Graduate School of Biomedical Sciences. Informed consent was obtained and the protocol was approved by the Institutional Review Board of Nagasaki University. All patients complained of morning stiffness and tender or swollen joints at more than one site on the wrist and finger joints. No patients had radiographic erosion on hands and feet plain radiographs at the first MRI study. All patients had been previously diagnosed as primary SS by physicians, but 9 of the 29 SS patients fulfilled the 1987 criteria of the American College of Rheumatology (ACR) for RA (7) after the diagnosis of primary SS, designated as secondary SS with RA. Baseline characteristics (age, duration of SS to the entry, serum IgG, prevalence of anti-SS-A/SS-B antibodies) of 29 patients, with or without fulfillment of RA, were not significantly different (data not shown). Sixteen of 29 SS patients underwent the second MRI. Indications for taking the second MRI were determined by each physician. The mean interval between the first MRI and second MRI was 10.9 months.

Plain MRIs of both wrists and finger joints were acquired using a 1.5T system (Sigma; General Electric Medial Systems, Milwaukee, WI) with an extremity coil. Coronal T1-weighted spin-echo and short-time inversion recovery (STIR) images were acquired as previously described (3, 8). The images were evaluated for bone oedema, bone erosion, and synovitis at 15 sites on each hand, including the distal radioulnar joint, the radiocarpal joint, the midcarpal joint, the first carpometacarpal joint, the second through fifth carpometacarpal joints (together), the first through fifth metacarpophalangeal joints, and the first through fifth proximal interphalengeal joints separately, as we recently reported (3, 8).

Table I. Autoantibodies and MRI finding in primary SS with articular manifestations and secondary SS with RA.

	First MRI and autoantibodies at baseline		
	Primary SS (n=20)	Secondary SS with RA (n=9)	*p*-value
Symmetric synovitis	11 (55%)	9 (100%)	<0.05
Bone oedema	0 (0%)	2 (22%)	NS
Bone erosion	1 (5%)	2 (22%)	NS
Tenosynovitis	8 (40%)	6 (67%)	NS
Anti-CCP antibodies	1 (5%)	5 (56%)	<0.01
IgM-RF	8 (40%)	5 (56%)	NS
	Second MRI		
	Primary SS (n=11)	Secondary SS with RA (n=5)	*p*-value
Symmetric synovitis	8 (73%)	5 (100%)	NS
Bone oedema	0 (0%)	5 (100%)	<0.0005
Bone erosion	1 (9%)	5 (100%)	<0.005
Tenosynovitis	4 (36%)	5 (100%)	<0.05

IgM-RF; latex-enhanced immuno-electrometric assay (Dade Behring, Marburg, Germany; cut-off value, 14IU/ml) and anti-CCP; DIASTAT Anti-CCP (Axis-Shield, Dundee, UK; cut-off value, 4.5 U/ml), respectively.
P-value was calculated by chi-square test and Fisher's exact probability test.

Results are summarised in Table I. Frequency of bone erosion, tenosynovitis and prevalence of IgM-RF were not statistically different in the presence or absence of RA. Bone edema was found only in secondary SS with RA patients (0% *vs*. 22%). The frequency of symmetrical synovitis and the prevalence of anti-CCP antibodies were significantly higher in secondary SS with RA. Prevalence of anti-CCP antibodies in secondary SS with RA patients was low as compared with patients of early-stage RA in our other cohorts (3, 8). It might come from small number of patients in the present study. None of the patients showed Jaccoud's arthropathy and few other extraglandular manifestations, except articular manifestations, were recorded. Interestingly, MRI-proven bone oedema was found in all patients with secondary SS with RA while no patients with primary SS showed bone edema even on the second MRI. In addition to bone oedema, other findings of symmetrical synovitis, bone erosion and tenosynovitis were more frequently found in secondary SS with RA patients as compared with patients of primary SS with articular manifestations at second MRI.

This study marks the first observational finding that MRIs of wrist and finger joints are clinically effective at differentiating the condition of arthritis in SS patients. Additional examinations, including musculoskeletal ultrasonography especially power Doppler ultrasonography (9, 10) with longer follow-up periods, are required to strengthen our results.

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Book review

Fast Facts: Rheumatoid Arthritis (*2nd. edition*)
by *John D. Isaacs and Larry W. Moreland*

Editor: Health Press, pp. 116, illustrated.
ISBN: 978-1-905832-91-0

The Fast Facts: Rheumatoid Arthritis handbook is a comprehensive, easy-to-read guide to rheumatoid arthritis. This book belongs to a novel medical handbook series which covers more than 70 topics in medicine providing practical overviews on various disorders.
This handbook on rheumatoid arthritis is divided into ten chapters which exhaustively but, at the same time, concisely explore the etiopathogenesis, the epidemiology and the clinical presentation of the disease and discuss rheumatoid arthritis diagnostic algorythms, traditional and biological therapeutical approaches and future developments.

Particularly valuable is the effort of this second edition of the handbook in providing updated information on all the topics discussed, including a mention to the new rheumatoid arthritis classification criteria and to the role of anti-citrullinated peptide antibody (ACPA) in the diagnostic process of the disease.
Given its peculiar approach to rheumatoid arthritis, this book represents an excellent resource for a large target audience including doctors who are not necessarily specialists in rheumatology, medical students and allied healthcare professionals.

Reviewed by
Dr C. Baldini, Rheumatology Unit, University of Pisa, Italy.

Erratum corrige

"Baseline characteristics of the population enrolled in the Italian Observational Study on Severe Osteoporosis (ISSO)"
S. Adami, D. Maugeri, V. Toscano *et al*.; for the ISSO study group, Italy.

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We sincerely apologise for the inconvenience and take this chance to express our gratitude for having participated in the ISSO study.