

Radiologically significant joint improvement in a patient affected by psoriatic arthritis treated with adalimumab

Sirs,

Psoriatic arthritis (PsA) is a chronic, complex multi-faceted disease with prominent involvement of the peripheral diarthrodial joints, axial joints, periarticular structures, skin and nails (1). In fact, more than half of the patients exhibit progressive erosive arthritis, associated with functional impairment (2). Clinical trials in PsA have shown excellent clinical results with the TNF- α antagonists, etanercept (3), infliximab (4) and adalimumab (5). Moreover, there is an important improvement of Quality of Life (QoL) (6).

Here, we present the case of a 46-year-old Caucasian man, affected by psoriasis since the age of twenty years old and from psoriatic arthritis since the age of forty. The onset of joint involvement was characterised by bilateral arthritis of the ankle and first interphalangeal distal (IPD) joint of the feet with concomitant exacerbation of the skin manifestation. Therefore the patient underwent different systemic treatments including cyclosporine, NSAID drugs (indomethacin and celecoxib), sulphasalazine and methotrexate which lead to improvement of the ankle arthritis but not of the bilateral arthritis of the first IPD joint of the feet nor of the skin disease. The patient was admitted at our Dermatological Division, on May 2006, presenting an extensive skin disease with a Psoriasis Area Severity Index (PASI) score of 15 and bilateral arthritis of the IPD joint of the feet with swelling and tenderness = 3 and pain score VAS = 52, although the patient was under methotrexate (15 mg weekly) and celecoxib (200 mg twice daily) treatment. Laboratory findings showed ESR 25 mm/h and CRP 9 mg/dl while radiological imaging revealed bilateral periostitis with ankylosis of the first IPD joint, worse on the left foot, with joint space narrowing and total joint destruction (Fig. 1A). Following standard screening procedures for anti-TNF- α therapy, a total number of five infusions with intra-venous infliximab 5mg/kg treatment were performed, leading to a partial control of the skin disease but no control of the arthritis. After two months of wash out, Adalimumab therapy was started at a dosage of 40 mg subcutaneous weekly. The treatment was well tolerated and no adverse reaction occurred. The patient was re-evaluated monthly for an overall follow-up period of twenty-four months. Laboratory



A.



B.

Fig. 1A. Radiological image of the feet showing bilateral periostitis with ankylosis of the first distal interphalangeal joint, worse on the left foot, with joint space narrowing and total joint destruction.

B. Radiological image of the feet after one year of treatment with adalimumab, showing bilateral resolution of the ankylosis and the periostitis on the first distal interphalangeal and normalization of the interarticular space.

variables (ESR and CRP) were negative. A complete remission of the arthritis was observed after three months of treatment (VAS for pain was 0, no swelling nor tenderness was present) and PASI dropped from 15 to 2.

TNF- α mediates a number of biological processes that can result in joint damage including stimulation of bone resorption and inhibition of bone formation. It has been suggested that these changes are modulated by molecular events underlying osteoclast differentiation (osteoclastogenesis) and activation. Anti-TNF- α antibodies seem to inhibit osteoclast formation (7). Adalimumab is the first fully human, high-affinity, recombinant immunoglobulin G(1) (IgG(1)) anti-TNF- α monoclonal antibody effective in the treatment of active psoriatic arthritis in patients with an inadequate response to disease-modifying antirheumatic drugs, improving both joint and skin manifestations of the disease as well as disability due to joint damage (8-9). The use of adalimumab led, in our patient, to an important improvement not only of the skin disease but also of the joint involvement. Interestingly, this therapy did not only halt joint damage but also improved the condition of the joint as shown through radiographic imaging. In fact bilateral resolution of the ankylosis and the periostitis on the first IPD joint of the feet as well as the normalization of the interarticular space, after two years of therapy was observed (Fig. 1B), indicating the efficacy of this drug for the treatment of both psoriasis and psoriatic arthritis.

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