Jaccoud's arthropathy of the hands as a complication of pyrophosphate arthropathy

Sir, Jaccoud’s arthropathy (JA) is a chronic deformity characterized by ulnar deviation of the second to fifth fingers and subluxation of the metacarpophalangeal (MCP) joints, which are voluntarily correctable by the patients. The toes may also be affected. JA was initially described as a complication of recurrent rheumatic fever.
[1]. Successively, it was reported in association with several rheumatic and non-rheumatic disorders, such as systemic lupus erythematosus [2] and other connective tissue diseases [3–6], psoriatic arthritis [7], inflammatory bowel disease [8] and malignancy [9]. We describe here for the first time a subject suffering from pyrophosphate arthropathy (PA) who progressively developed JA.

A 72-yr-old Caucasian woman was admitted to our department in September 1999 with an 8-yr history of recurrent acute mono/oligoarthritis involving the wrists, MCP joints and knees and lasting only 1 or a few weeks. NSAIDs and/or steroids had been prescribed by others in the course of some of her attacks, with good results. Calcium pyrophosphate dihydrate crystals were identified in the synovial fluid of a knee in the course of a relapse. For the last 4 yr the patient had complained of progressive ulnar deviation of the second to the fifth fingers of her hands, and during the last year she also suffered from a slight painful swelling of the MCP joints and wrists. On admission to our department, examination revealed a correctable subluxation of the second and third MCP joints in both hands and severe limitation of movement in the wrists. History and physical examination were negative for skin and mucosal diseases, bowel and ocular involvement and for any disorder that has been described previously in association with JA. Family history was negative for the above-mentioned diseases.

The only findings of note in our extensive laboratory tests were a high erythrocyte sedimentation rate (ESR) (43 mm/h) and a high C-reactive protein concentration (5.1 mg/dl). In particular, the following were normal or negative: rheumatoid factor, Waaler–Rose reaction, serum glucose, serum calcium, serum phosphate, serum uric acid, haemoglobin, iron and ferritin concentrations, antistreptolysin-O antibodies, immunoglobulins, cryo-globulins, antinuclear antibodies, anti-DNA antibodies, anti-ENA (extractable nuclear) antibodies, liver and renal functions.

X-rays confirmed soft-tissue swelling around the MCP joints and wrists. Extensive calcification of the triangular ligament and articular cartilage was also seen in the wrists. Calcification was less severe in the MCP joints. Osteopenia and erosions were absent. An X-ray examination of the knees showed chondrocalcinosis of fibrocartilage structures associated with a typical picture of hypertrophic osteoarthritis.

We formulated the diagnosis of PA (a chronic form of pseudogout) complicated by JA. We decided to administer meloxicam 15 mg/daily, and 1 month later there was a noticeable improvement of the clinical and laboratory findings associated with PA. As expected, the deformations of JA persisted. Subsequently, we recommended the daily administration of meloxicam for 1 week each month. We have documented so far only two relapses.

Definite criteria for the diagnosis of JA have not yet been established, and the pathogenesis is understood incompletely [10]. However, an inflammatory process localized in the periarticular soft tissues (including the tendons and joint capsules) has been indicated as the primary cause [2]. A similar mechanism may be hypothesized for our case. In effect, this patient had suffered for a long period from recurrent acute pyrophosphate-induced arthritis comparable with the clinical picture of recurrent rheumatic fever, the first disease to be described in association with JA. In our opinion, the calcifications induced by PA are not relevant in the pathogenesis of JA, otherwise these disorders would be frequently described in association.

This report increases the number of rheumatic disorders that may be associated with JA.

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