Chronic Polyarticular Tophaceous Gout masquerading as Rheumatoid Arthritis

The Editor,

Sir,

Gouty arthritis most often begins as monoarticular arthritis in a lower extremitiy, predominantly the first metatarsophalangeal joint, however if left untreated polyarticular involvement and development of tophi becomes more and more frequent as time passes by, especially during the chronic gouty arthritis stage (1, 2). In this stage, due to the presence of polyarthritis and subcutaneous nodules, which are typically seen in rheumatoid arthritis (RA), chronic polyarticular tophaceous gout may masquerade as RA (2, 3). Herein, we present an unusual case of chronic polyarticular gout masquerading as RA**.**

A 51-year-old male presented with swelling and pain of both wrists, left knee and right ankle for 3 days. He reported similar episodes over the 10 years in hands, shoulders and feet, each lasting several weeks and was alleviated with non-steroidal anti-inflammatory drugs (NSAIDs), which were his only medications. Physical examination revealed swelling and tenderness in both wrists and right ankle, and suprapatellar joint effusion in left knee. A skin colored subcutaneous 1x1 cm firm nodule was seen over the right fifth metacarpophalangeal joint and an other one 1x1.2 cm on back of left calf (figure 1).



Fig.1: Skin colored subcutaneous nodules on right fifth metacarpophalangeal joint and back of left calf (arrows).

Symmetrical wrist involvement and presence of nodules, initially led us to diagnose him as seropositive RA. Initial blood tests results were as follows; white blood cells (WBCs) count: 11,400 cells/mcL, hemoglobin: 15.7 d/dL, platelet count: 245,000 cells/mcL, creatinine: 0.9 mg/dl, alanine transaminase (ALT): 53 U/L, aspartate transaminase (AST): 31U/L, erythrocyte sedimentation rate (ESR): 20 mm/h and C-reactive protein (CRP): 12.1 mg/dl (N: 0-5). Anti–cyclic citrullinated peptide (CCP) and rheumatoid factor (RF) were negative. The x-rays of the hands were unremarkable and knee radiographs showed mild degenerative changes (figure 2).



Fig. 2. A) Frontal radiograph of the hands showed no significant joint narrowing and no erosive changes. B) Frontal radiograph of the knees showed mild medial tibiofemoral joint space narrowing and minimal osteophytes.

Since RF and anti-CCP were negative, the nodules presumably were not rheumatoid and the radiographs were unremarkable even he had a 10-year history of episodes, these findings reduced the likelihood of RA. Therefore, we suspected the uncommon presentation of gouty arthritis that rarely mimics RA. His serum uric acid level was found to be 8.4 mg/dl (N: 2.5-7.5). For definitive diagnosis of gout, his left knee was aspirated. Gross appearance of synovial fluid was yellow and transparent. The WBCs count was 400/mm^3. Monosodium urate crystals were identified under polarized light microscopy (figure 3).

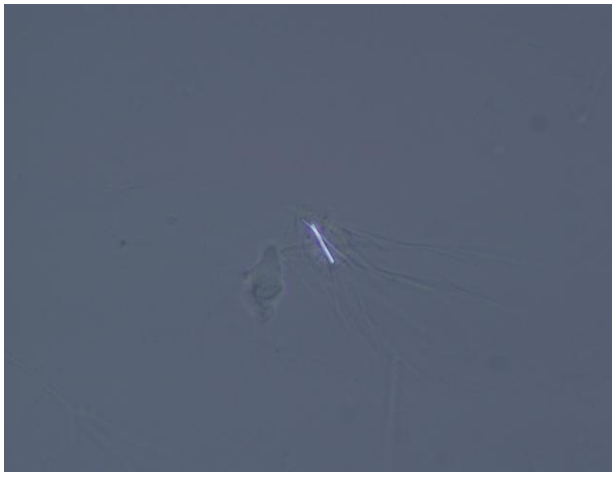


Fig.3: Polarized light microscopy showed negatively birefringent, needle-shaped monosodium urate crystals.

The patient was diagnosed as polyarticular gouty arthritis. Treatment with colchicine 1.5 mg/d was initiated for prompt and safe termination of the acute attack. After one month of this therapy, allopurinol 150 mg/d was added to colchicine treatment for prevention and reversal of the urate crystal depositions. Symptoms of patient had been improved and no attack of arthritis was observed at 6 months follow-up.

Gout rarely presents with polyarthritis, subcutaneous nodules, symmetrical joint involvement and morning stiffness, which are commonly seen in RA, and the clinical presentaion of these cases may mimic RA and cause diagnostic dilemma (2-5). Our patient had polyarthritis, subcutaneous nodules and symmetrical wrist involvement resembling a RA. However, subcutaneous nodules are frequently seen in patients with RF-positive RA (6). Therefore, in patients with nodules and RF-negativity, other diseases including tophaceous gout should be suspected. Our patient presented with arthritis, subcutaneous nodules and he however was seronegative for RF, this was inconsistent with RA. Furthermore, radiological images are useful to differentiate between these two diseases. Unlike the RA, radiological features of gout

arthritis are: asymmetrical joint involvement, preserving of joint spaces until the late stages and punched out erosions with sclerotic overhanging margins. Also, periarticular osteoporosis, which is often present in RA, is very rare in gout arthritis (7). Hand and knee graphics of our patient were unremarkable, which were also not consistent with a 10-year history of RA.

With presenting our unusual case, we would like to call attention to the rare presentation of gouty arthritis, which may masquerades as RA and so may cause a diagnostic dilemma. In clinical practice, when evaluating the patients with polyarthritis and subcutaneous nodules, which are typical features of RA, a high index suspicion for gouty arthritis is needed.

Keywords: Gouty arthritis, polyarthritis rheumatoid arthritis, tophi

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