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Case Report

Obscured bilateral arthritis: A peculiar inceptive dispensing of common arthritis

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Dactylitis is a known manifestation of seronegative spondyloarthropathy. Here, an unusual case of psoriatic arthritis presented initially with isolated erosive metacarpophalengeal joint arthritis of both thumbs for 2 years without obvious etiology was reported. Later on, dactylitis and skin psoriasis were developed.

Keywords: Erosive arthritis, dactylitis, metacarpophalangeal joint arthritis.

INTRODUCTION

Early arthritis may develop into established rheumatoid arthritis or into another definite arthropathy, which may resolve spontaneously, or may remain undifferentiated. Intensive interventions early in the course of persistent arthritis may profoundly affect long term radiographic progression (Combe et al., 2007).

CASE REPORT

A 52-year-old female patient was referred to the Rheumatology Service with a history of bilateral thumb swelling for 1 year. Her problem started 7 months ago with pain and swelling in the right thumb, then few months after she started to have the same problem in the left thumb.

Among the symptoms observed, she had only swelling and tenderness, but she had no redness, trauma or other joints involvement. There was no indication of morning stiffness, skin rashes, history of connective tissue diseases, skin rashes, constitutional symptoms or history of spondyloarthropathy. More so, she was not known to have any medical illness. However, she did not take any regular medications apart from non steroidal anti-inflammatory drugs (NSAIDs). Her family history was negative for arthritis, psoriasis, connective tissue diseases or spondyloarthropathy. Upon further clinical examination, there was tenderness and swelling over both thumbs' metacarpophalangeal (MCP) joints with normal range of motion. Other joints' examination was unremarkable, though there were no skin rashes and nail changes.

Laboratory tests revealed that the C-reactive protein (CRP) levels were elevated to 12. Other laboratory complete blood count, renal and liver functions were normal. Hands X-rays showed bilateral sublaxation and erosions with overhanging edges involving the head of the first metacarpal and the base of proximal phalanx. Joints' space was still preserved, with soft tissue swelling, but no soft tissue calcification was observed (Figure 1). These findings were reported by our musculoskeletal radiologist.

It was observed that the patient's chest x-ray was normal. At that time, we started the patient on colchicine 0.5 mg orally two times daily as a case of gouty arthritis since she did not improve on NSAIDs over the past year. Serum uric acid level as well as further workups was requested.

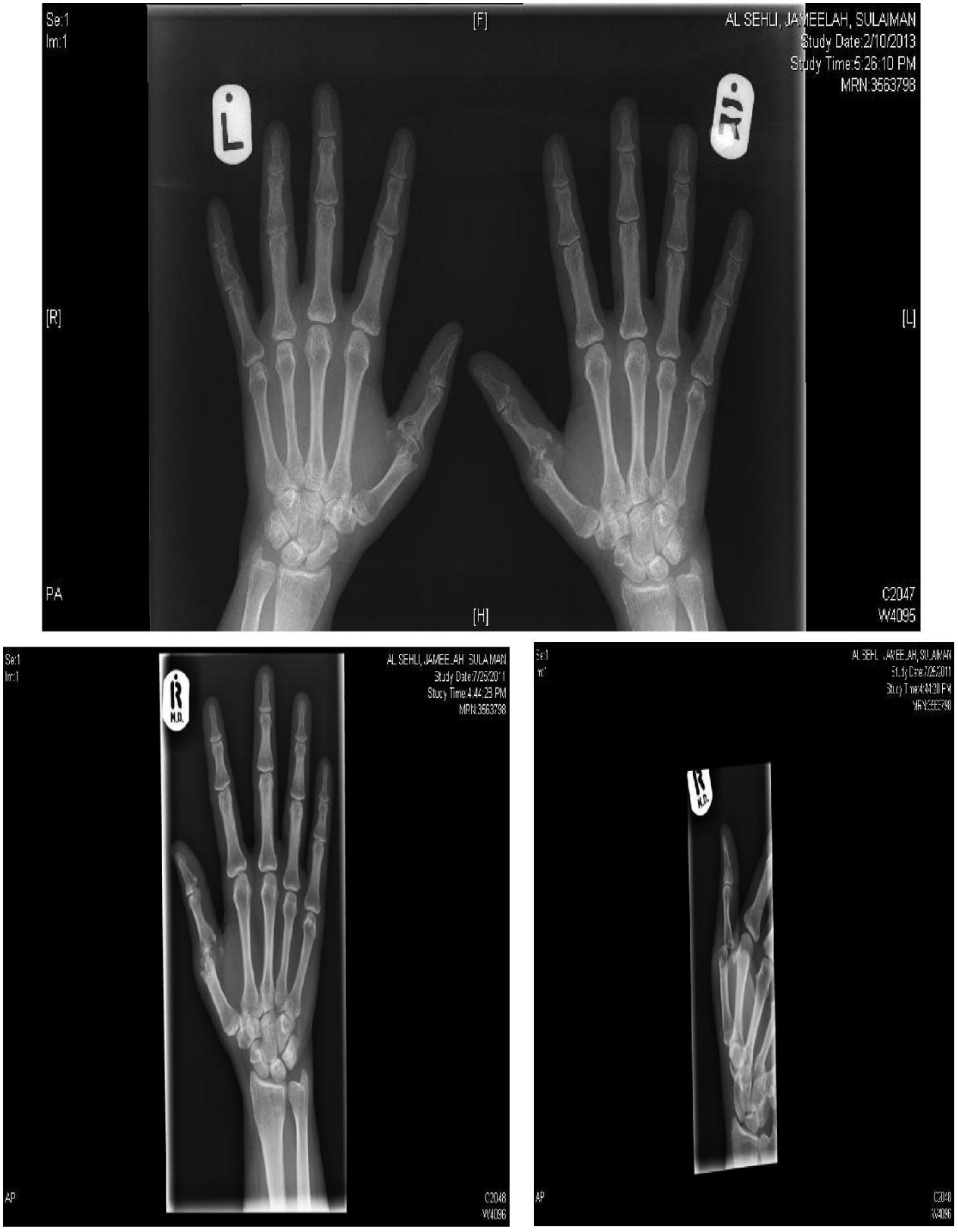

Figure 1. Hands X- rays showed bilateral sublaxation and erosions with overhanging edges involving the head the of first metacarpal and the base of proximal phalanx.

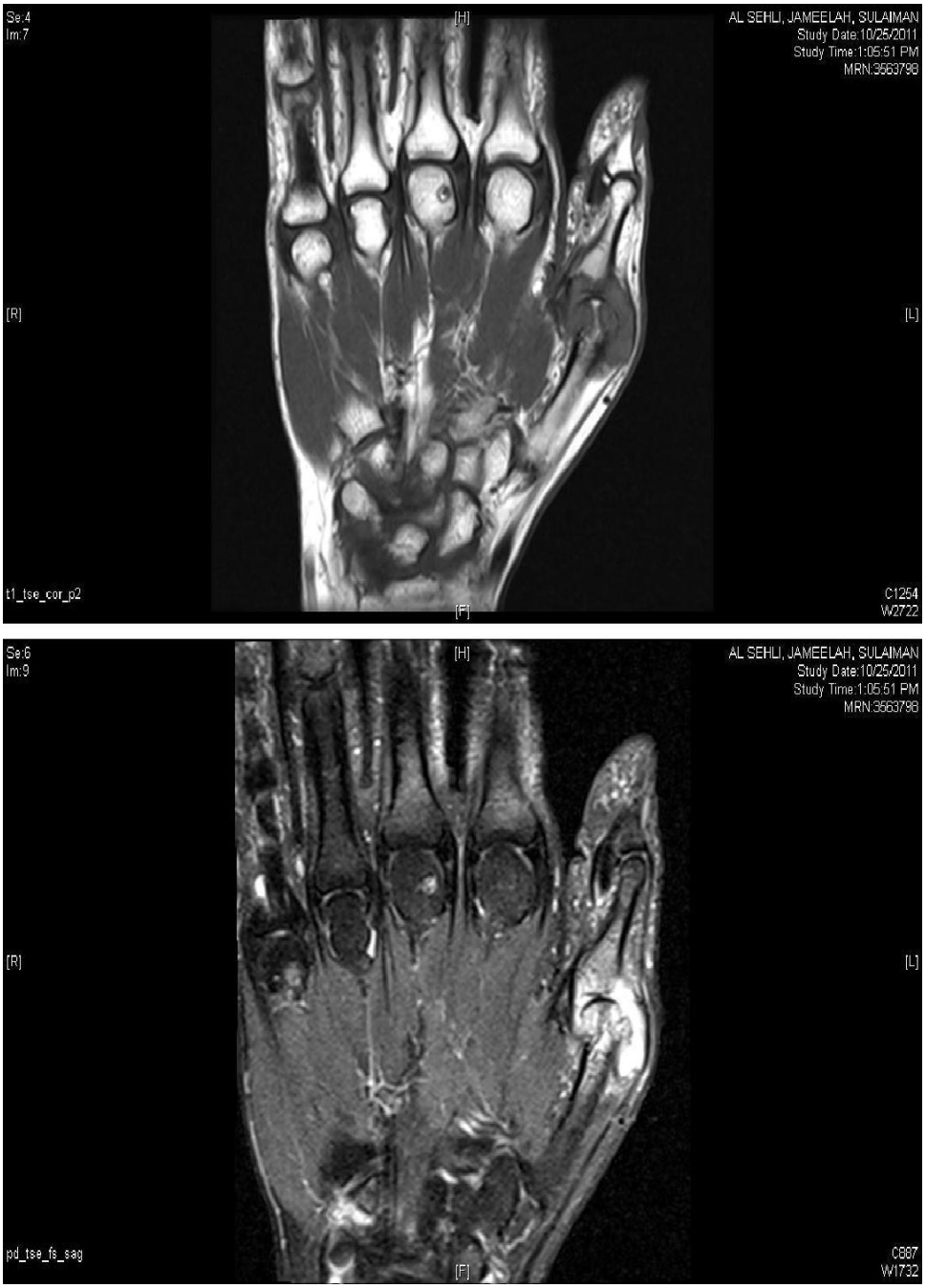

Figure 2. MRI synovitis with marginal erosions and subluxation of the proximal interphalengeal joint of the right thumb.

Further follow up showed that there was no improvement in the patient's symptoms. Serum uric acid was normal as well as serum ferritin, calcium, magnesium and parathyroid hormone (anti-nuclear antibody). ANA and rheumatoid factor (RF) were both negative. However, anti cyclic citrullinated peptide (ACPA) was not available in this study's lab at that time.

The authors of this study requested the MRI of the patient's right hand to further delineate the condition showing synovitis with marginal erosions and subluxation of the proximal interphalengeal joint of the right thumb which could represent erosive arthropathy or inflammatory changes (Figure 2). Since all laboratory workups were negative and the patient did not improve

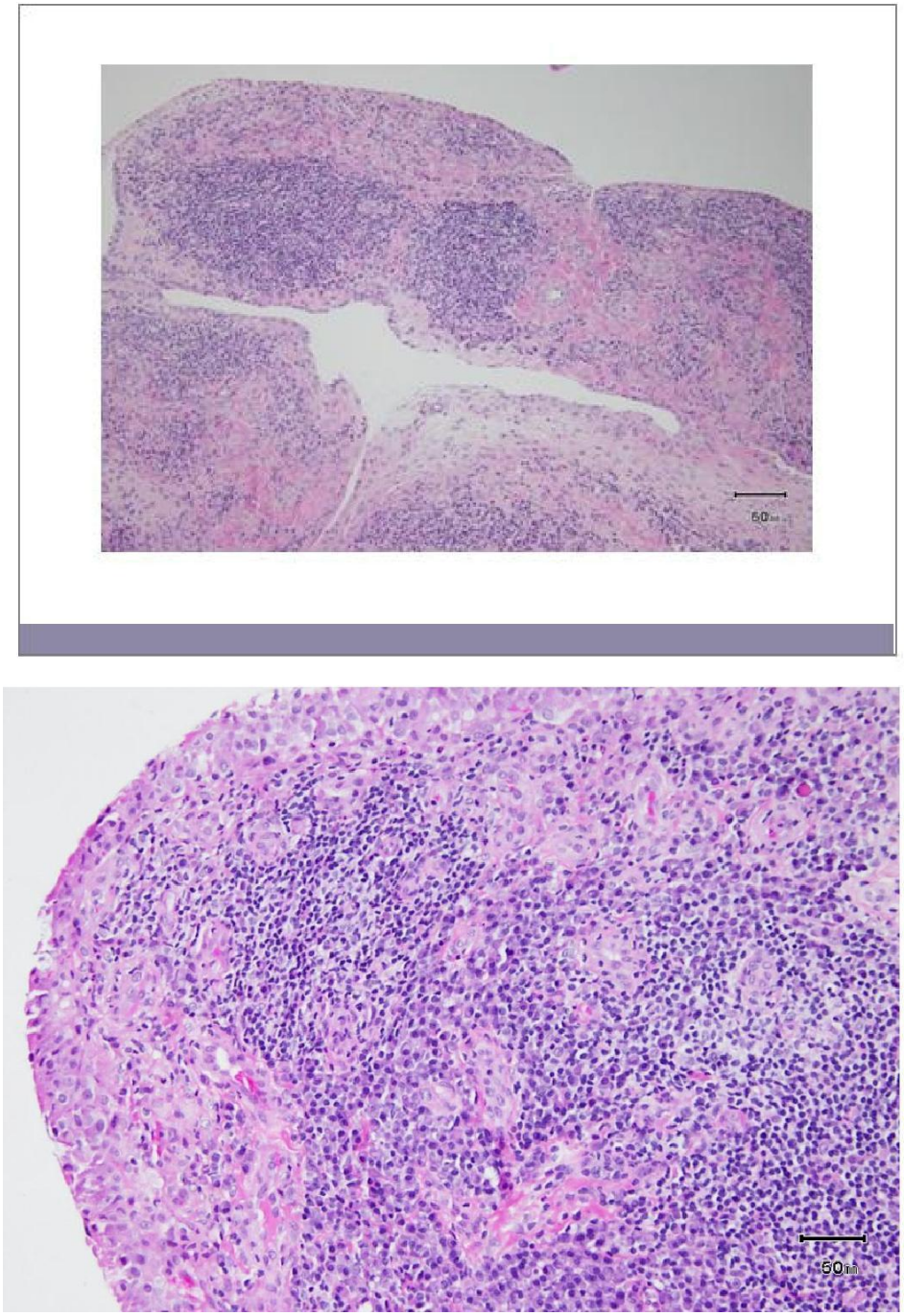

Figure 3. Reactive hyperpalstic synovial tissue with chronic inflammation. No granuloma or necrosis. No giant cells, No eosinophills or histicytes seen.

on colchicines, we decided to get synovial biopsy which showed reactive hyperpalstic synovial tissue with chronic inflammation. However, no granuloma or necrosis was observed, and no giant cells, or eosinophills or histicytes were seen. Thus, the malignancy of the bacterial and fungal culture was negative (Figure 3).

One month after the biopsy, she presented with new left fourth finger pain and swelling in addition to pain in both thumbs. No other joint was affected according to the patient. Clinical examination showed dactylitis of the left fourth and fifth fingers (Figure 4).

ACPA was strongly positive. We discontinued

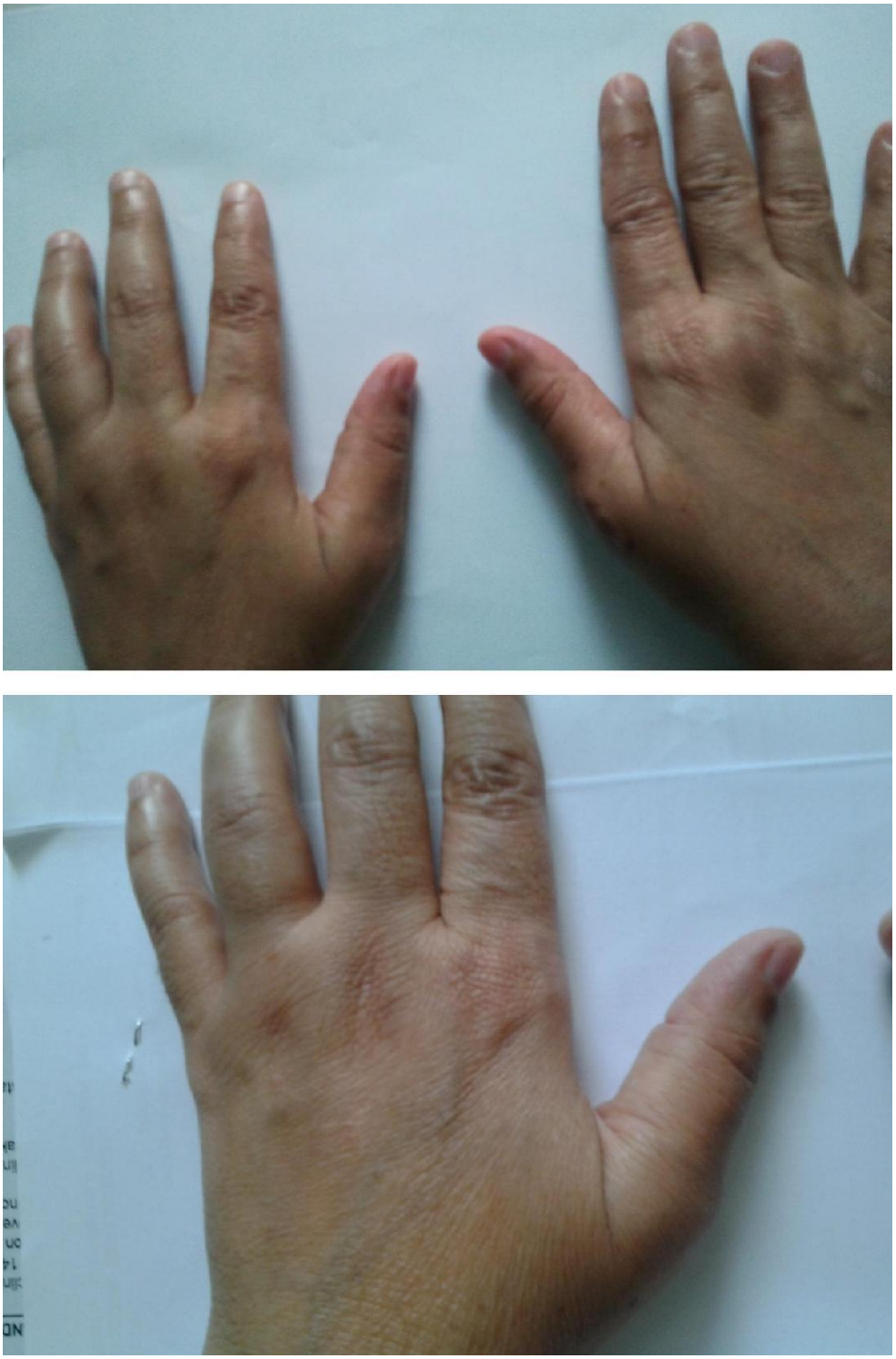

Figure 4. Swelling in both thumbs and dactylitis of left fourth and fifth fingers.

colchicine and started methotrexate (10 mg orally weekly) and folic acid as rheumatoid arthritis (RA). Further follow up was done for 2 months. After starting methotrexate, the patient's symptoms improved, and no other joint involvement was observed except for only two swollen joints (thumbs MCP).

As regards CRP 17, DAS 28 low disease activity (Eisuke et al., 2007), the dose of methotrexate was increased to 15 mg weekly and the patient felt clinically better with improvement of thumb swelling as well. It was observed that the patient, after the last clinical visit she made before the case was reported, was seen in dermatology clinic as she developed multiple scaly skin rash on the hands like psoriasis.

DISCUSSION

Here, we report a difficult challenging case to diagnose as the patient presented with symmetrical isolated thumb MCP involvement. She initially has wide differential diagnosis rather than simple osteoarthritis giving the bony erosions in x-rays. Arthritis of the MCP joint can result in considerable disability and pain. Inflammatory, posttraumatic, crystalline, and osteoarthritis are common etiologies (Rizzo, 2011).

Special attention must be paid in this case to erosive osteoarthritis, a clinically uncommon subset of generalized osteoarthritis (OA) characterized by a clinical course, which is frequently aggressive. The diagnosis of EOA is accepted only for patients that meet American College of Rheumatology's clinical criteria for OA of the hand (Altman et al., 1990). The diagnosis must show radiographic aspects of articular surface erosions which is central erosion in the proximal plate and marginal proliferation in the distal plate of the distal interphalengeal joint (DIP) and proximal interphalengeal joint (PIP) with a 'gull wing' appearance. The commonly involved joints are DIP, PIP, and bilateral CMC (Leonardo, 2004).

This study's patient neither fulfilled The American College of Rheumatology's criteria for hand osteoarthritis nor the typical erosion of erosive osteoarthritis. In this difficult case in a middle aged female, a rare differential of erosive OA comes in mind which is multicentric reticulohistiocytosis (MCRH). It is an uncommon disease with joint and cutaneous manifestations most commonly affecting women in middle age. The diagnosis must be confirmed by the histological evidence of typical mononuclear histiocytes and multinucleated giant cells. Arthritis tends to be symmetrical, maximally affecting interphalangeal joints of the hands. Without the accompanying skin lesions, the arthritis is commonly misdiagnosed. Our patient did not have the typical joint involvement, neither did she have skin lesions nor the diagnostic histopathology (Trotta et al., 2004).

Given the radiological erosions, it is characteristically punched out with overhanging edges for gout (Schlesinger and Thiele, 2010). We started the patient on colchicines (Hamburger et al., 2011). As we mentioned earlier that our patient is not fulfilling ACR criteria for hand OA, then we must think of a cause of OA in a typical location such as calcium pyrophosphate (CPP) disease as it may present as pseudo-osteoarthritis, and a predisposing metabolic disease (including haemochromatosis, primary hyperparathyroidism, hypomagnesaemia) can be found (Zhang et al., 2011a). We screened our patient for these conditions and she was normal. The patient did not improve on NSAID or colchicine which is the recommended management of CPP disease (Zhang et al., 2011b).

Finally, after all the aforementioned workups and therapeutic measures, our patient did not improve, as she had positive ACPA and MRI suggestive of inflammatory arthritis. We make the diagnosis of rheumatoid arthritis (RA) as per the American College of Rheumatology/ European League Against Rheumatism (ACR/EULAR) criteria for RA, and she scored 7 which makes the diagnosis of RA (Daniel et al., 2010). We started the patient on methotrexate (Jasvinder et al., 2012) and she improved on it. However, the presence of dactylitis which is a manifestation of seronegative spondyloarthropathy makes the diagnosis uncertain (Olivieri et al., 1996).

Dactylitis is associated with Reiter's syndrome, psoriatic arthritis, sarcoidosis, flexor tendon sheath infections, and gout. The presence of dactylitis eliminated rheumatoid arthritis from the differential diagnosis (Bruce, 1998). ACPA as well may be positive in psoriatic arthritis (Vander Cruyssen et al., 2005). Oligoarticular presentation is common in psoriatic arthritis (Wright and Moll, 1971), though arthritis may precede skin manifestations of psoriasis. Our patient later on developed scaly plaques likely psoriasis. So, the diagnosis of psoriatic arthritis was made as the clinical picture fulfills CASPAR criteria (Taylor, 2006), and methotrexate was continuously used as treatment for psoriatic arthritis (Gossec et al., 2012).

CONCLUSION

The patient used in this study finally developed a picture that is typical of psoriatic arthritis with dactylitis and skin psoriasis. Her initial presentation was strange with isolated destructive thumbs MCP arthritis. The picture was confusing with the positivity of RF and ACPA which may be positive as well in psoriatic arthritis.

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