

Acute Inflammatory Polyarthritis: A Rare Presentation of Secondary Syphilis

Dear Editor,

Syphilis can present in a myriad of ways. Recognition of this “great imitator”, which can be easily treated, will greatly reduce morbidity.

A 46-year-old Chinese male presented with intense inflammatory polyarthritis of his bilateral metacarpophalangeal, wrists, elbows, knees, ankles and metatarsophalangeal joints for 2 weeks. Joint tenderness was alleviated with movement and associated with early morning stiffness lasting more than 30 minutes. He also reported rashes over his chest, scalp, hands and feet over the previous 3 months. Two days prior to the onset of the above symptoms, he experienced vomiting, abdominal pain and non-bloody diarrhoea which resolved spontaneously. He was subsequently admitted for worsening arthritis which had resulted in inability to weight-bear. He denied any history of fever, loss of appetite and loss of weight. There was no axial or gluteal pain and no urethral symptoms. Family history for autoimmune diseases was unremarkable. The patient denied any prior sexual exposure. Treatment from his physicians consisted of topical clotrimazole for his rashes and prednisolone (3 mg bd) for his arthritis, which did not significantly improve his condition.

On physical examination, erythematous papulosquamous plaques were noted over his sternum, palms and soles (Figs. 1 to 3). Of note, there was faint macular hyperpigmentation over his palms. Intense synovitis was present over the aforementioned joints with tense effusion over his left

knee and dactylitis of multiple toes. Conjunctival injection, cervical lymphadenopathy and right thumb onycholysis were noted. There were no genital lesions or urethral discharge.

Investigations revealed elevated erythrocyte sedimentation rate (ESR) of 127 mm/h and C-reactive protein (CRP) of 133.5 mg/L. He was also noted to have hypoalbuminaemia of 25 g/L. Aside from iron deficiency anaemia, his full blood count, renal panel, liver function test and autoimmune serologies were unremarkable. No organisms were recovered from the blood cultures and fungal scrape of his



Fig 2. Erythematous papulosquamous plaques associated with dactylitis and post-inflammatory hyperpigmentation on both feet.



Fig 1. Scaly plaques with underlying erythema and post-inflammatory hyperpigmentation over the palmar surface of hands.

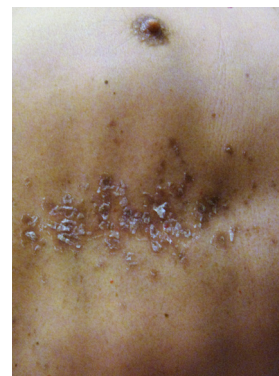


Fig.3. Scaly plaques with underlying post-inflammatory hyperpigmentation on the sternal region.

soles and palms were negative. Plain radiographs of his bilateral hands and ankle joints did not reveal bony erosions. Rapid plasma reagin (RPR) was performed despite patient's claim of no prior sexual exposure and it returned positive with a titre of 1:256. Enzyme immunoassay for syphilis IgG was also reactive. Human immunodeficiency virus (HIV), hepatitis B and C screening were recommended but the patient declined evaluation. One dose of benzathine penicillin G 2.4 MU was given during admission and by 2 weeks post-treatment, there was complete resolution of the patient's rashes and polyarthriti.

The prevalence of syphilis in Singapore has been increasing since 1999.¹ Groups who are particularly affected include men-who-have-sex-with-men and HIV-infected individuals.² Unfortunately, syphilis can present in many forms, mimicking other pathologies. This makes timely diagnosis and treatment difficult.

The differentials for the case above include spondyloarthropathies such as reactive arthritis (previously known as Reiter Syndrome), psoriatic arthritis and enteropathic arthropathy, which can all present with peripheral inflammatory polyarthropathy, dactylitis and nail dystrophy. However, the arthritis in reactive arthritis tends to occur 1 to 4 weeks after the infectious trigger. Despite the presence of conjunctival injection, the onset of arthritis in this case occurred too soon after the antecedent episode of self-limiting gastroenteritis. Moreover, reactive arthritis tends to present with asymmetrical oligoarthritis. Psoriatic arthritis does not usually present in such an explosive polyarticular fashion. There were no features of personal or family history to suggest inflammatory bowel disease.

The patient's rashes were papulosquamous but not psoriasiform, and post-inflammatory hyperpigmentation was present on his palms, a feature atypical of rashes in psoriasis and reactive arthritis. The abovementioned atypical joint and skin features prompted an evaluation with syphilitic serology, despite the patient's insistence of no prior sexual exposure. Beside palmoplantar papulosquamous eruption, the typical features of secondary syphilis include moth-eaten non-scarring alopecia and snail track oral ulcers. Other rare musculoskeletal manifestations include symmetrical acute inflammatory arthritis, dactylitis and onycholysis, which can occur in both congenital and acquired syphilis.^{2,3} Characteristically, syphilitic arthritis is not painful on gentle passive movement, unlike rheumatic joint diseases. Presentation of joint involvement is protean. Early treatment allows for cure and improvement in patient outcomes.² Syphilitic dactylitis is triggered by flexor tenosynovitis.⁴ Onycholysis occurs when syphilitic infiltration precipitates the formation of a nail bed granular layer leading to detachment of the distal nail plate.⁵

This case highlights polyarthriti as a rare presentation

of secondary syphilis. It underscores the importance of ordering appropriate investigations for syphilis based on clinical suspicion despite an incongruent sexual history, as patients may not be forthcoming with the latter. An early diagnosis of syphilis will allow for prompt treatment and cure with antibiotics, reducing subsequent systemic complications from tertiary disease.

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