16. TB OR NOT TB? A MISTAKEN CASE OF SAPHO IN A 65 YEAR OLD MALE

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Introduction: SAPHO is a rare syndrome of osteoarticular disorders with associated skin manifestations. The classic constellation of symptoms includes synovitis, acne, pustulosis, hyperostosis and osteomyelitis. Estimated prevalence is 1-4/10,000, but the syndrome is underdiagnosed due to its variable presentation and lack of formal diagnostic criteria. SAPHO is a diagnosis of exclusion and conditions such as infectious osteomyelitis and bone tumours must be eliminated first. We present a case of SAPHO, mistaken for spinal tuberculosis (TB).

Case description: A 67-year-old Caribbean man with a history of type 2 diabetes mellitus and multiple prolapsed discs requiring surgical fixation presented in 2014 with severe back pain, swinging fevers and weight loss. ACT scan showed sclerosis of T5/10 vertebrae with corresponding bone oedema on an MRI spine. He commenced induction treatment for TB based on radiological features and travel history. Two months later, an MRI spine showed progressive inflammation at T10/11. Blood and tissue samples were negative for acid fast bacilli. Mycobacterium cultures, Interferon-gamma release assay (IGRA) and PCR were negative. However, treatment for TB was continued for a further ten months. Three months later, he re-presented with thoracic back pain and night sweats. MRI showed new inflammation at T6/7 and L3/4 reported as probable osteomyelitis. IGRA, blood and tissue cultures remained negative. Meanwhile, the patient suffered nine episodes of synovitis affecting knees and wrists. Knee X-rays showed end-stage hypertrophic osteoarthritic changes with severe osteophytosis. Synovial biopsies showed inflammatory changes but no evidence of TB.

The patient re-presented in 2018 with back pain, sternoclavicular (SC) joint tenderness, painful knee swelling, night sweats and weight loss. Blood and synovial fluid cultures were negative, with calcium pyrophosphate crystals detected in synovial fluid. USS scan of the SC joint showed floridly active right-sided synovitis and synovial thickening on the left. CRP was 350 and he was treated with broad spectrum antibiotics for two weeks for presumed septic arthritis. Rheumatology review was requested when he failed to improve. His constellation of symptoms (synovitis, hyperostosis, osteitis and a history of a pustular rash) suggests a diagnosis of SAPHO. He commenced a weaning prednisolone regime and given zoledronic acid to good effect. Recurrence of symptoms occurred at low dose prednisolone, so he was given IM steroids and commenced on methotrexate.

Discussion: SAPHO is underdiagnosed due to its variable presentation and the need to first exclude infection and malignancy. The patient’s radiological features consistent with spinal TB and risk of TB exposure delayed diagnosis, despite negative serology and cultures. It is important to be aware that the full constellation of symptoms may not be evident at the time of presentation, or indeed at all in the course of the condition; our patient reported a prior history of a pustular rash on the soles of his feet, although there was no clinical evidence of this at the time of review. Involvement of classically affected joints, including anterior chest wall and thoracic spine, or skin involvement should increase clinical suspicion of SAPHO. NSAIDs and corticosteroids are first line therapy, with DMARDs, biological agents and bisphosphonates used to maintain remission.

Key learning points: Practitioners must consider the possibility of SAPHO, particularly in those with symptoms of osteomyelitis but no identifiable pathogen or who do not respond to antibiotic therapy. High inflammatory markers or high fevers do not preclude its diagnosis. As such, it is important to exclude infection, including osteomyelitis and septic arthritis, and malignancy prior to making a diagnosis. Clinicians should also be aware that the patient may not present with the full SAPHO syndrome; close review of past medical history and questioning about unreported episodes of synovitis or rash may be required to make the diagnosis.

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