

An uncommon differential solves the mystery of phalangeal swelling: A case report on Tuberculous Dactylitis

Abstract:

Background:

Tuberculosis, historically known as 'consumption', is an infectious disease caused by the bacteria *Mycobacterium tuberculosis* (MTB). Though it primarily affects the lungs, extra-pulmonary involvement by the MTB bacteria and its clinical manifestations are becoming increasingly common, particularly in immunocompromised patients. Skeletal tuberculosis constitutes 10-15% of cases of extra-pulmonary tuberculosis. Tuberculous infection of the metatarsal, metacarpal, and phalanges of hand and feet is known as tuberculous dactylitis. Tuberculous dactylitis is rare and it constitutes 2–4% of skeletal tuberculosis cases, predominantly affecting children under 5 years of age and adolescents. Clinically, it presents as an insidious, painless swelling, however in some instances it can be associated with mild pain. Tuberculous dactylitis occurs most commonly through hematogenous route with primary focus being in the lungs. Due to its unusual and rare presentation in adult population, diagnosis of tuberculous dactylitis in this demographic presents a unique challenge as clinicians usually have a lower level of suspicion.

Method:

Imaging modalities vis-à-vis USG, plain radiograph, non-contrast CT scan and MRI were used to evaluate the case of a reproductive age-group female presenting with a painless swelling over middle phalanx of third digit of left hand. The aim is to highlight how to navigate the complexities of imaging findings, eventually helping us to eliminate other differential diagnoses. Histopathological examination however was found to be conclusive in making the diagnosis of tuberculous dactylitis.

Results:

The case highlights the enigmatic radiological nature of tuberculous dactylitis. Despite the use of USG, plain radiograph, CT scan and MRI, imaging findings yielded non-specific outcomes and were not conclusive in arriving at the diagnosis – underscoring the challenges encountered in differentiating tuberculous dactylitis from other bone pathologies.

Conclusion:

Tuberculosis remains a menace, especially in the developing countries, with ever increasing globalization leading to an increase in the incidence of tuberculosis in the developed world as well. Thus, tuberculous dactylitis should always be a part of differential diagnoses when evaluating a case of phalangeal swelling as prompt diagnosis will lead to appropriate and adequate treatment. However, it remains a diagnostic dilemma radiologically hence emphasizing the importance of adopting a multidisciplinary approach, including incorporating clinical context and tissue (FNAC or biopsy) correlation, for arriving at the diagnosis.

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