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Case Report

Osteoarticular tuberculosis dactylitis: Four cases ☆

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ABSTRACT

Tuberculosis dactylitis is exceptional. We report 4 cases of osteoarticular tuberculous dactylitis in 3 women and 1 man. The diagnosis was suspected on chronic and insidious clinical presentation, and confirmed by histology. Patients were treated by anti-tubercular drugs with good functional and radiological outcome in all cases. Clinical and therapeutic issues are discussed by the authors in the context of an endemic country.

Introduction

Tuberculosis (TB) remains one of the most widespread infectious diseases in the world. The osteoarticular TB represents 5% of all TB. The tubercular involvement of the finger bones is an exceptional presentation of extra-pulmonary TB [1]. The insidious presentation, the poor symptomatic character of the tubercular dactylitis may explain the constant delay in the diagnosis. It is often delayed and confused essentially with bone tumors which imply histological confirmation. This location responds effectively to anti-tuberculous drugs. The following study reports 4 cases of TB dactylitis through which various diagnostic problems and therapeutic implications are illustrated.

Case presentations

Case 1

A 64-year-old woman, diabetic and hypertensive, presented with pain and swelling of the fourth finger of the left hand that appeared after a benign trauma that occurred 21 days before. There was no history of fever, weight loss or loss of appetite. The clinical study found a swelling and inflammatory aspect of the skin of the finger. The finger motion was painful and limited. Left hand radiograph showed an osteolytic lesion with blurred limits of the first and the second phalanxes of the fourth finger (Fig. 1a). There was a cortical lysis without a periosteal reaction (Fig. 1b). Other lytic lesions were discovered at

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the level of the first and the second phalanxes of the fifth finger of the left hand. The interphalangeal joint did not present articular pinching. The analytical study showed elevated acute phase reactants (erythrocyte sedimentation rate: ESR = 60) and a total leukocyte count at 8500/mm^3. The intraoperative exploration of the fourth finger showed a friable bone with a grayish white necrosis material with soft consistency. Bacteriological study was negative. The histological study revealed granulomatous inflammation with caseous necrosis. The special coloring of Ziehl–Neelsen did not highlight the *Mycobacterium tuberculosis* (MTB). This typical histological aspect made it possible to carry the diagnosis of a tubercular dactylitis. The investigations did not show other tubercular sites. The intradermal tuberculin reaction test was negative. Chemotherapy associating four anti-tubercular drugs was prescribed (isoniazid, rifampicin, pyrazinamide and streptomycin) over 2 months followed by bi-therapy (isoniazid, rifampicin) over 10 months. This was associated with immobilization of the fourth finger by a splint for 21 days. There was a remarkable response to therapy with the disappearance of inflammatory signs. Radiograph after 14 months showed a significant reduction in the size of the lytic lesions with sclerosis around (Fig. 1c).

Case 2

A 38-year-old woman, under corticotherapy, presented with a painful swelling of the fourth right finger for 2 months. The clinical study showed a painful swelled finger at the level of the proximal interphalangeal joint, without inflammatory signs or ulcerations. The mobility of the interphalangeal joint was painless. There was no history of fever. The right hand radiograph showed, at the level of the second phalanx of the fourth finger, multiple geodic, not-well-limited osteolytic lesions and a fracture of the phalanx without periosteal reaction. The interphalangeal joint did not present articular pinching (Fig. 2a). The analytical study showed a normal rate of acute phase reactants (ESR = 25) and a total leukocyte

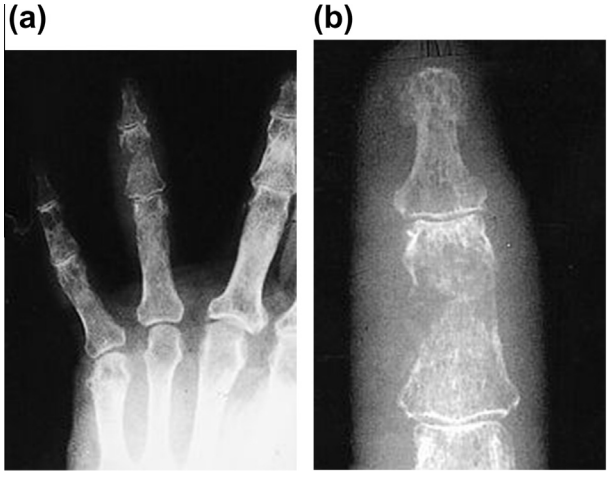

Fig. 1a, b – X-ray showing osteolytic lesion of the first and second phalanxes of the fourth and fifth fingers, with cortical lysis and fracture of the second phalanx of the fourth finger without periosteal reaction.

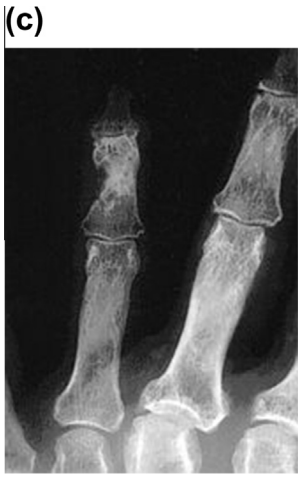

Fig. 1c – X-ray showing osseous reconstruction after 14 months of anti-tubercular chemotherapy.

count of 8600/mm^3. The intraoperative exploration showed friable bone with a geode that contained caseum. The bacteriological study was negative. The research of the MTB after culture on the Löwenstein–Jensen medium was negative. The histological study found a granulomatous inflammation with caseous necrosis confirming the diagnosis of tuberculous dactylitis. No other tubercular site was found. The intradermal tuberculin reaction test was positive. The patient received anti-tuberculous chemotherapy associating for 2 months: isoniazid, rifampicin, pyrazinamide and streptomycin, followed by bi-therapy (rifampicin, pyrazinamide) with a total duration of 16 months. An immobilization of

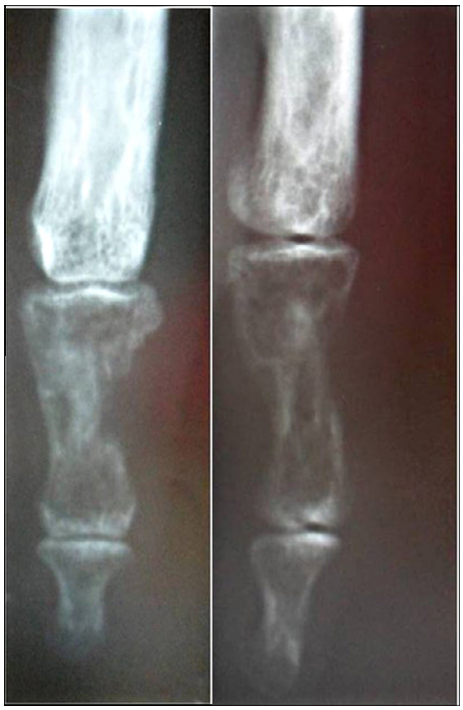

Fig. 2a – X-ray showing osteolytic lesions of the second phalanx of the fourth left finger.