

Tuberculous Tenosynovitis of the Wrist: A Case Report

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Abstract

Case Report

Tuberculous tenosynovitis is a rare localization of tuberculosis. Diagnosis is often delayed due to poor and chronic clinical manifestations. We report a case of tuberculous tenosynovitis of the left wrist with a favourable evolution under antituberculosis treatment.

Keywords: Tenosynovitis, tuberculosis, hand.

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INTRODUCTION

Tenosynovitis can occur during chronic inflammatory rheumatism. It is also a rare site of extra-vertebral osteoarticular tuberculosis, even in endemic countries. Diagnosis of tuberculous tenosynovitis is clinical and histological, and is often delayed due to the lack of clinical manifestations and the evolution is most often towards functional sequelae in the absence of early treatment.

OBSERVATION

Mrs N.H, aged 47, with no previous pathological history, was admitted to the orthopaedics and traumatology department (Arrazi hospital,

Marrakech) with swelling of the left wrist which had been present for 15 months, with no other accompanying signs.

On examination: no fever, swelling of the anterior face of the right wrist (zone V), soft, crackling, mobile and painless with active flexion deficit of the 2nd and 3rd fingers, associated with paresthesias in the median nerve territory.

X-rays of the hand were normal, and ultrasound was ordered in favour of flexor tenosynovitis. MRI revealed signs of tenosynovitis of the flexor tendons of the carpus and thumb.

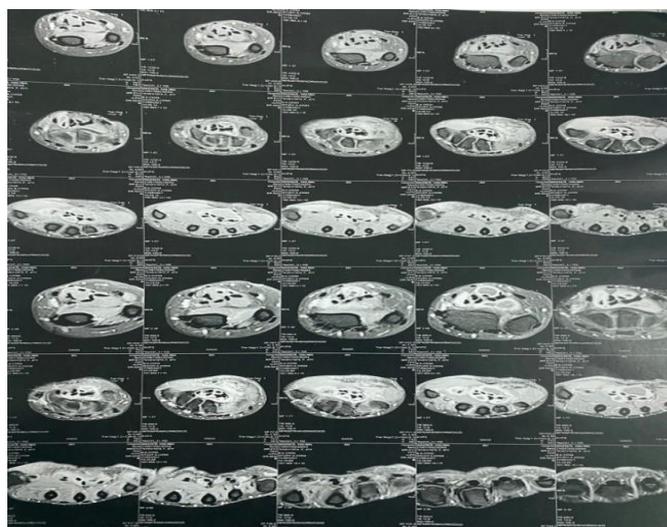


Figure 1: Axial section by magnetic resonance

Intraoperatively, the presence of friable whitish tissue infiltrating the flexor tendon sheath was noted, with a riziform grain formation. Synovectomy was performed, opening the flexor retinaculum and freeing the sheaths.

Anatomopathological examination was in favour of an epithelioid, giganto-cellular and necrotic granuloma, initially suggesting a tubercular origin.



Figure 2: Grain of rice appearance

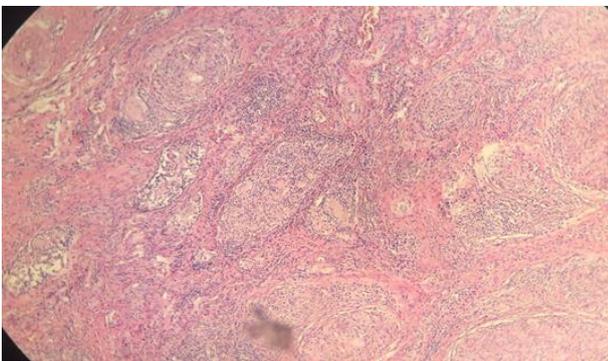


Figure 3: Epithelioid, giganto-cellular and necrotizing granuloma

Anti-tuberculosis treatment for 9 months resulted in a favourable outcome.

DISCUSSION

Involvement of the musculoskeletal system represents 1% to 5% of extrapulmonary manifestations of tuberculosis. Tuberculous tenosynovitis accounts for 5% of osteoarticular tuberculosis and predominates in the wrist and palmar aspect of the hand, with flexors being affected much more frequently than extensors. Tuberculous tenosynovitis has an insidious onset. The swelling becomes obvious after several months, mobility becomes limited and it may progress to fistulisation.

Local inflammatory signs are discreet. Our patient did not seek medical attention until fourteen months after the onset of the disease, which bears witness to the insidious evolution of the symptoms. Carpal tunnel syndrome may be observed in cases of wrist flexor involvement. The clinical picture may also simulate De Quervain's tenosynovitis. Inoculation may be direct or by haematogenous dissemination from a distant site. A systematic search must be made for other tuberculous sites, mainly pleuropulmonary, but also bone, lymph nodes and kidney. In our patient, the tenosynovitis was primary since no other infection, either contiguous or distant, was identified. In 30% of cases, this infection may be triggered by trauma, forced labour, corticosteroid infiltration, immunosuppression (HIV infection and long-term corticosteroid therapy), alcoholism or age >60. Biologically, there is often an inflammatory syndrome, and the sedimentation rate (ESR) is highly suggestive but non-specific.

Ultrasound is a useful examination for confirming the diagnosis of tenosynovitis and showing its extension, as in the case of our patient. It shows an increase in the volume of the synovial sheath, forming a sleeve around the tendon. Tendon thickening or an abscessed fluid collection may be seen.

MRI is certainly the most useful and sensitive examination, showing synovial proliferation but also, in some cases, abscess formation and destruction of adjacent bone. Bacteriological evidence is present on direct examination in only 20% of cases, and cultures are negative in 35-45% of cases. Gene amplification methods based on synovial fluid are more sensitive and allow rapid and specific detection of BK. With regard to histology, Kanavel *et al.*, described three progressive stages: the 1st stage corresponding to a serous exudate, the second to granulation tissue with or without a "grain of rice" appearance (the case of our patient) and the 3rd stage, which is later, corresponds to fungus associated with extensive caseous necrosis.

Tuberculous tenosynovitis may be diagnosed in conjunction with infection with other mycobacteria responsible for granulomatous tenosynovitis: mycosis, brucellosis, foreign body tenosynovitis or sarcoidosis. Once the diagnosis has been made, treatment is straightforward and patients generally recover with little or no after-effects. Treatment is based on surgery and anti-tuberculosis drugs.

CONCLUSION

Tuberculosis infections of the wrist, although rare, are still regularly encountered. The course is insidious and diagnosis remains difficult in the early stages. Biological tests, ultrasound and MRI help to orientate the diagnosis. Histological studies provide a definitive diagnosis.

Any patient with chronic or recurrent tenosynovitis whose functional prognosis is at risk should be considered for tuberculosis. The radical nature of the surgical procedure and the effectiveness of the medical treatment are the only guarantees of functional recovery.

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