

Longstanding Complicated Wrist Swelling: Atypical Presentation of Primary Tuberculosis A Case Report and Mini Review

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ABSTRACT

Tuberculosis of the wrist is an uncommon clinical entity and mostly presents as insidious pain and swelling. Presentation of a singular carpal bone involvement as the sole feature of tuberculous infection is a relatively uncommon event. In this report the authors describe a case of scaphoid fracture in a 20-year-old male patient, and underlying tuberculous infection suspected by ultrasonographic examination of the wrist joint, magnetic resonance imaging and guided aspiration and culture of the joint fluid. Introducing anti tuberculous drugs under appropriate supervision resulted in clinical improvement and optimal regain of function. No reactivation of the disease was noted in a follow-up of 2 years. This case highlights a rare presentation of tuberculosis presenting with a fracture of scaphoid.

INTRODUCTION

Primary (isolated) Tuberculosis of the hand and wrist has been reported as an uncommon clinical presentation. The incidence of extra-pulmonary tuberculosis reported in literature has ranged from 10% to 15%, of which hand tuberculous infection accounted for <1% [1-3].

Each specific location of TB in the wrist and the hand has its own symptomatology. The affection of the wrist typically begins in the scapholunate joint. The diagnosis is usually delayed and misdiagnosed, but when discovered at an early stage, a well-followed medical treatment is usually enough to provide full healing.

CASE REPORT

The case presented is an Egyptian 36-year-old female patient, housewife married with no off springs and has no special habits of medical importance referred to the outpatient clinic of rheumatology and rehabilitation complaining of painless, multiple swellings of the left wrist of 1 year and 6 months duration [4-8].

The condition started 1 year and 6 months ago with painless multiple swellings of the left wrist, of gradual onset and progressive course, not associated with morning stiffness or local redness. The patient sought medical advice at orthopedic clinic at Al Kasr Alainy Hospital, where aspiration of one of the swellings and investigations were done. Plain x ray of the wrist revealed an old fracture of Lt distal forearm with avascular necrosis of the scaphoid bone (Figure 1).



Figure 1. Plain radiography of the left wrist joint showing avascular necrosis of the scaphoid bone, large cystic lesions in distal radius, an old fracture of Lt distal forearm that was later surgically treated by wire fixation.

The patient was referred to rheumatology and rehabilitation outpatient clinic for musculoskeletal and ultrasonographic assessment. Clinical history and examination were done supported by musculoskeletal US which revealed significant villous like synovial thickening with increased vascularity. Scaphoidectomy, wire fixation and synovectomy of extensor compartment were done at the orthopedic clinic. Review of

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the history for the present illness, the patient gave history of loss of weight despite of good appetite, vague history of unmeasured fever, more in the morning not associated with skin rash, rigors or excessive night sweats and not associated with an evident source of infection. There was no history of subcutaneous nodules, no other joint or musculoskeletal complaints of significance. There was no history of alopecia,

oral ulcers, genital ulcers, malar rash, photosensitivity or Raynaud's phenomenon, no history of DVT, TIAs, stroke or any vascular event, no history of cough, hemoptysis or dyspnea. No history of tingling, hypothesia or muscle weakness, no history of chronic diarrhea or change of bowel habits or GIT bleeding. No history of bleeding from anybody orifices (**Figure 2**).



Figure 2. Ultrasound examination of the left wrist using an 8-13 MHz linear transducer significant synovial thickening with increased vascularity on doppler examination with multiple locular fluid filled compartments and floating hyperechoic shadows.

Figures 3 & 3b are the computerized tomography scan (CT scan) of the Lt wrist revealed an old non-united fracture of the left scaphoid bone waist with gapped sclerosed fracture ends and adjacent tiny bone chips. Scapholunate dissociation with widening intervening spaces. Anterior tilt of the lunate

bone denoting ventral intercalated segmental instability. Secondary osteo-arthritic changes of radio-carpal joint with marginal osteophytosis of articular surface. Multi-locular cystic lesion is seen along dorsum of Lt wrist measuring 3.2 x 2.5 cm, likely extensor tendon tenosynovitis (**Figure 4**).

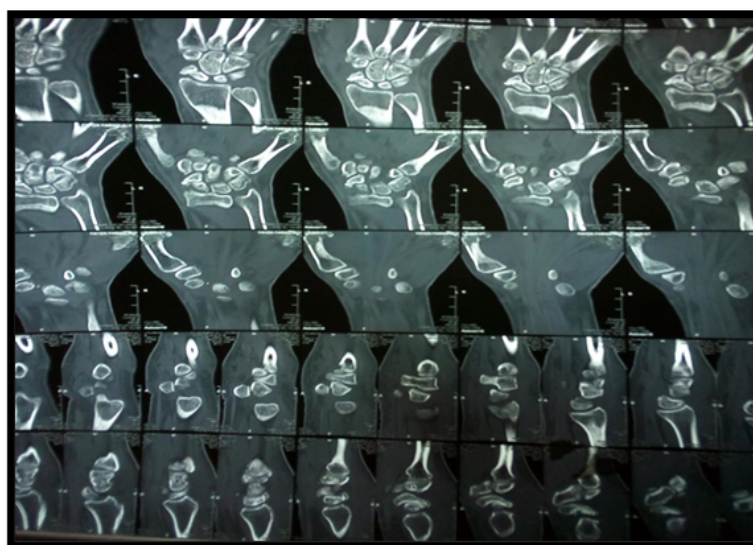


Figure 3a: CT of the left wrist.



Figure 3b. CT of the left wrist.

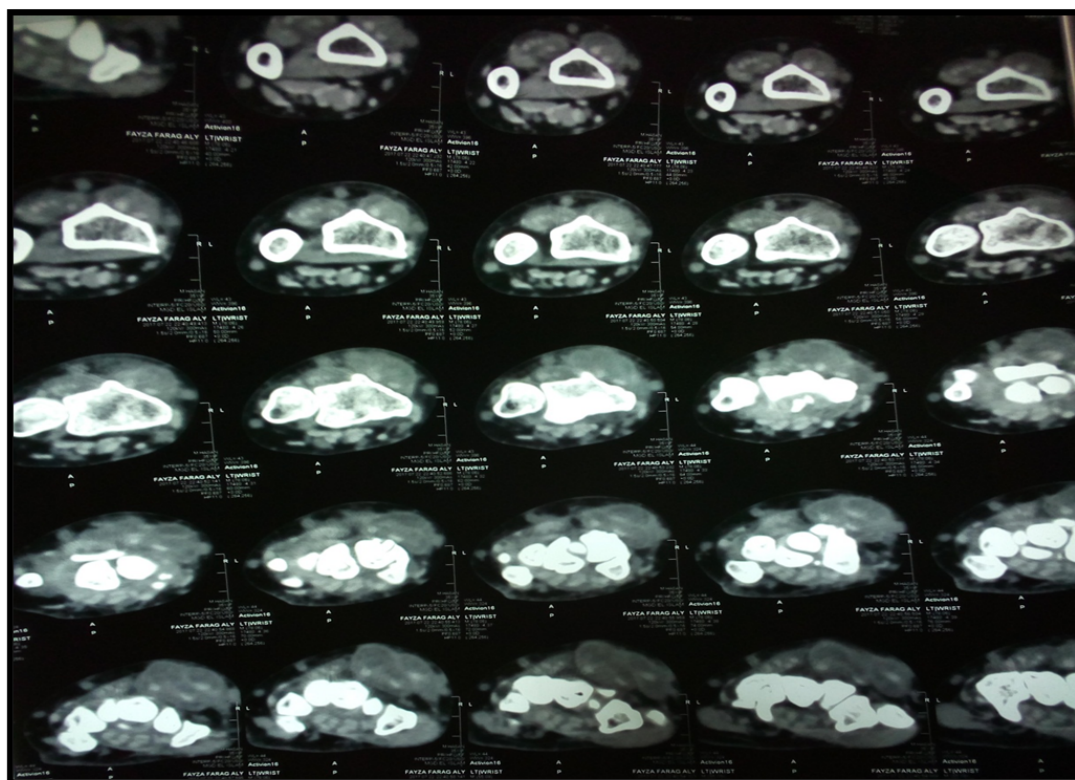


Figure 4. MRI of the left wrist using different pulse sequences in different planes Scaphoid fracture is seen. Normal appearance of the proximal and distal carpal bones with no evidence of avascular necrosis (AVN). No fluid collection is seen.

PATHOLOGY AND HISTOPATHOLOGICAL EXAMINATION

Gross pathological examination revealed multiple irregular fibrofatty tissue pieces, collectively measuring 6x6 cm with rubbery tan cut section. Multiple irregular tan pink tissue pieces, collectively measuring 2x2 cm totally submitted.

Microscopic tissue examination revealed synovial tissue showing multiple scattered granulomatous tubercles formed of epithelioid cells, multinucleated giant cells and lymphocytes. Moderate fibrosing reaction. Minimal caseation. Fibrinous material. Positive culture for tuberculosis (T.B). Findings consistent with tuberculous infection with tuberculous synovitis.

Treatment: The patient was started on anti-tuberculous therapy together with radical synovectomy showing a good response to treatment.

CONCLUSION

In the presented case report authors present a rare case of persistent wrist swelling in a middle-aged female that was diagnosed radiologically and histo-pathologically as a case of primary tuberculosis of the wrist joint [9-12]. Tuberculosis of wrist joint though uncommon should be considered amongst the differentials in any atypical presentation with wrist pain and/or swelling of the wrist joint with or without significant history of concomitant or past tuberculous infection.

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