Tuberculous Tenosynovitis of the Wrist: A Rare Case Report.

Introduction

Tuberculosis remains a major public health problem, especially in developing countries. Musculoskeletal tuberculosis accounts for a small proportion of extrapulmonary tuberculosis, while tuberculous tenosynovitis is considered an uncommon manifestation. The wrist and hand flexor tendons are the most frequently affected sites. Because of its insidious onset and non-specific presentation, diagnosis is often delayed.

Patients usually present with chronic swelling of the wrist associated with pain or progressive limitation of motion. Magnetic resonance imaging (MRI) is useful for evaluating tendon sheath involvement and soft tissue extension, but histopathological examination remains the gold standard for diagnosis. Anti-tuberculous chemotherapy is the cornerstone of treatment, whereas surgery may be necessary for biopsy, synovectomy, drainage, or decompression.

We report the case of a 32-year-old Moroccan woman presenting with tuberculous tenosynovitis of the wrist treated successfully with combined medical and surgical management.

Case Presentation

A 32-year-old Moroccan woman with no previous history of tuberculosis exposure presented with progressive swelling of the volar aspect of the wrist evolving over several months. The patient complained of discomfort and progressive limitation of wrist motion without fever, weight loss, or night sweats.

Clinical examination revealed a non-inflammatory swelling over the flexor aspect of the wrist with mild tenderness and restricted mobility. No cutaneous fistula or neurovascular deficit was identified.

Routine laboratory investigations demonstrated a mild inflammatory syndrome. Standard radiographs were unremarkable. MRI of the wrist showed extensive flexor tenosynovitis with marked synovial thickening and fluid distension of the tendon sheaths extending through the carpal tunnel.

Intraoperative exploration through a volar approach revealed hypertrophic inflammatory synovium associated with numerous rice bodies surrounding the flexor tendons. Complete synovectomy and surgical debridement were performed, and multiple specimens were sent for histopathological and bacteriological analysis.

Histopathological examination demonstrated granulomatous inflammation with epithelioid giant cells and caseous necrosis, confirming tuberculous tenosynovitis.

The patient was treated with anti-tuberculous chemotherapy consisting of isoniazid, rifampicin, pyrazinamide, and ethambutol during the intensive phase followed by isoniazid and rifampicin during the continuation phase.

Postoperative evolution was favorable with disappearance of swelling, pain relief, and progressive recovery of wrist mobility.

Discussion

Tuberculous tenosynovitis is a rare chronic granulomatous infection that usually affects the flexor tendons of the hand and wrist. The disease progresses slowly and may remain undiagnosed for several months because of its non-specific clinical manifestations.

MRI plays an important role in early diagnosis by demonstrating synovial thickening, tendon sheath distension, and fluid collections. However, definitive diagnosis relies on histopathological confirmation.

Rice bodies are characteristic intraoperative findings in chronic tuberculous tenosynovitis. These fibrinous oval structures result from chronic synovial inflammation and are strongly suggestive of tuberculosis in endemic areas.

Treatment mainly relies on prolonged anti-tuberculous chemotherapy. Surgical treatment is complementary and allows biopsy, synovectomy, decompression, and prevention of tendon rupture or median nerve compression.

Early diagnosis and combined medico-surgical management usually provide satisfactory functional outcomes and reduce recurrence risk.

Conclusion

Tuberculous tenosynovitis of the wrist is a rare but important differential diagnosis in chronic wrist swelling, particularly in tuberculosis-endemic countries. MRI is useful for evaluating lesion extent, but histopathological examination remains essential for definitive diagnosis. Combined surgical synovectomy and anti-tuberculous chemotherapy provide favorable clinical and functional outcomes. Early diagnosis is crucial to avoid irreversible tendon and nerve damage.

Figures

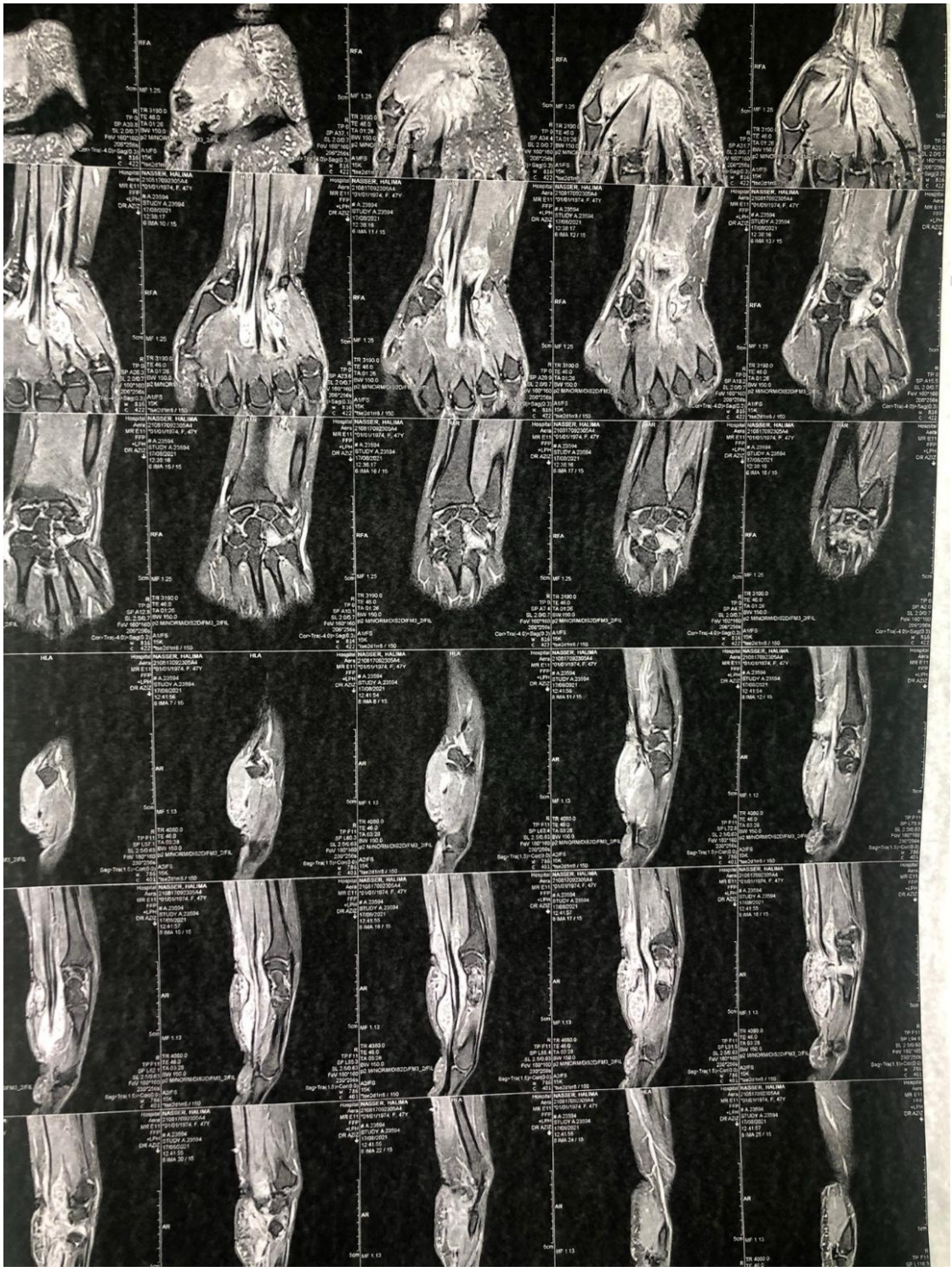


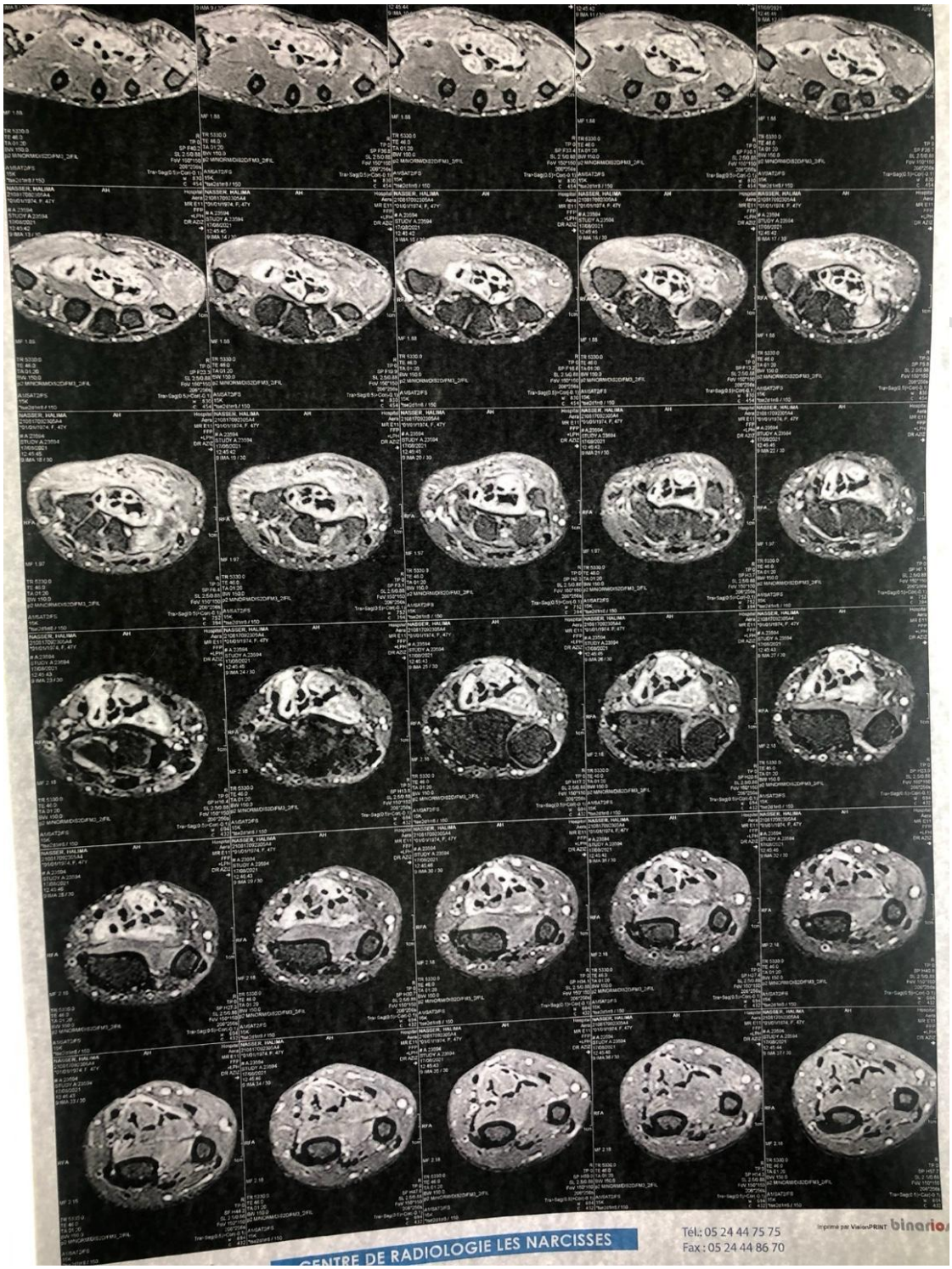
Figure 1

Figure 2

Figure 3

Figure 4

Figure 5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