

## A RARE CASE OF FUNGAL TENOSYNOVITIS OF THE UPPER EXTREMITY

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## ABSTRACT

Fungal tenosynovitis is a rare condition that occurs sporadically, mainly in patients with immunodeficiencies. We report a case of a 53-year-old women with diabetes and a 5-year evolution of tenosynovitis. Findings that should suggest fungal tenosynovitis are reviewed based on data from the literature.

**KEYWORDS:** Tenosynovitis, Fungal infection, upper extremity.

## BACKGROUND

The diagnosis of infectious tenosynovitis is not always easy, it can be difficult, especially if the clinical presentation is atypical and the course is insidious.

Fungal tenosynovitis is very rare but it should be thought of after eliminating other chronic infections, especially tuberculosis.

## CASE REPORT

We report the case of a 53-year-old woman, followed for 8 years for a very unbalanced diabetes despite the start of insulin therapy, no notion of tuberculosis contagion in the last two years, her articular symptomatology dates back 5 years by the gradual onset. painful renitent masses located on the anterior surface of both elbows and on the palmar surface of the left wrist with swelling of the left thumb (**Figure 1**).



**Figure 1:** Renitent mass on the palmar surface of the left wrist with swelling of the thumb.

The patient reports nocturnal awakenings and morning stiffness estimated at more than two hours, the assessment of pain on the visual analogue scale was 5/10. She presents as extra articular sign a dry mouth and headaches in occasional helmets. Weight loss of 20kg in 2 years and night sweats have also been reported. She received corticosteroid therapy: Methylprédnisolone 4 mg / d for 2 years.

Clinical examination found synovitis of the left wrist with the appearance of enormous tenosynovitis of the flexor digitorum thumb of the left hand. The same aspect was noted on both elbows.

Faced with this clinical picture, we first mentioned tuberculosis, given the epidemic context of our country, the notion of weight loss and night sweats.

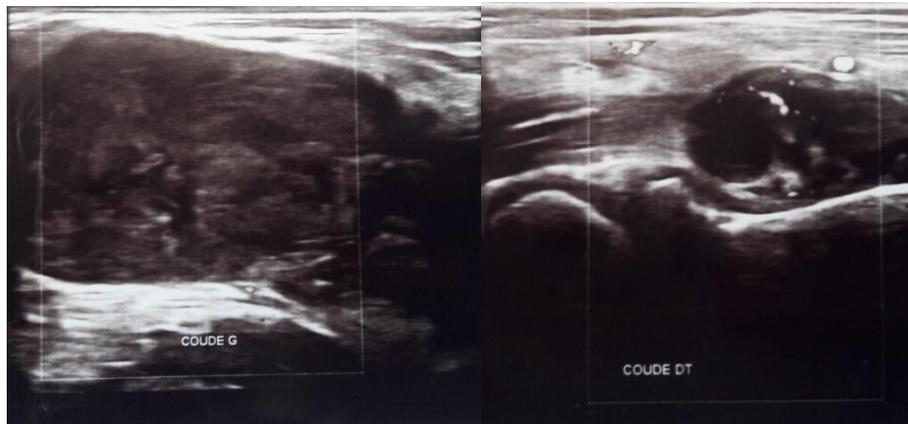
In the biological assessment, a slight hyperleukocytosis at 11080 predominantly PNN was noted, there was no biological inflammatory syndrome, the sedimentation rate was estimated at 17 and the C-Reactive Protein at 1.1, the renal and hepatic results were correct, fasting blood sugar at 1.90g / l and glycated hemoglobin (HbA1C) at 12.5%, Viral serologies for viral hepatitis B and C as well as HIV were negative. The chest x-ray was normal and the tuberculin skin reaction was negative. The x-ray of the hands demonstrated destruction of the left carpus.

The immunological workup was positive, Latex at 160 and Waaler Rose at 96 and ACPAs also positive at 59.

Joint ultrasound (**Figure 2**) showed the presence of enormous tenosynovitis of the flexor of the thumb involving the entire synovial sheath. Magnetic resonance imaging (**Figure 3**) showed multiple collections of the

synovial sheath of the flexor tendon of the thumb with extension on the palmar face of the hand at the height of P1 and P2 of the thumb, with T1 hypointense and enhanced T2 hypersignal. in shell at the periphery after

injection of gadolinium. It is associated with a hypersignal of all the carpal bones with multiple cortical irregularities and pinching related to destructive carpalitis.



**Figure 2: Ultrasound of the left (a) and the right (b) elbow showing tenosynovitis of the flexor of the thumb.**

A synovial biopsy of the left elbow found fibrinoleukocyte material with fibrinous deposits, she did not object to epithelioid granuloma or caseous necrosis. Ordinary culture did not show any germs, the expert gene was negative and the test for Mycobacterium Tuberculosis was negative.

infections should be considered among immunocompromised patients.

In our case, the diagnosis was delayed by 5 years, diabetes mellitus and corticosteroids were risk factors of chronic infection. In contrast to the classic fungal tenosynovitis, our patient did not present cutaneous ulcers or skin changes despite the prolonged infectious course.



**Figure 3: Magnetic resonance imaging of the right hand showing tenosynovitis of the flexor tendon of the thumb with extension on the palmar face of the hand.**

Faced with the negativity of these explorations, the diagnosis of tuberculosis seemed less probable. We thought of a fungal infection despite the rarity of this diagnosis, for this reason we performed an ultrasound-guided puncture of tenosynovitis of the flexor of the left thumb which brought back a liquid very thick purulent whose culture in a sabouraud medium has objectified Mycelium filaments.

## DISCUSSION

Fungal tenosynovitis of the upper extremity is uncommon and often misdiagnosed. This type of

A variety of epidemiological, clinical, progressive, and paraclinical arguments must be used to elicit such an infection. This form of subacute tenosynovitis is most common in people who are immunocompromised, with the infection spreading through the bloodstream.<sup>[1]</sup> On the occasion of skin breakage, direct inoculation of the synovial sheath with infected material works appears to be probable. As a result, all epidemiological cases in which the patient is in direct contact with the telluric fungal reservoir include professional manual work and outdoor recreation.

In mycosis, the classic histological appearance of an epithelioid and gigantocellular granuloma centered by a fungus is absent in severe immunosuppression. The germ is highlighted thanks to particular stains (PAS, Gomori-Grocott). Cultivation in Sabouraud's medium identifies the responsible fungus. If the culture is negative, serology and in situ immunostaining on tissue sections are useful.<sup>[1]</sup>

Involvement of the synovial sheaths is very rare in joint mycosis. Other organs can be affected. The most frequently encountered manifestations are pulmonary, cutaneous, bone, urogenital and neurological. In this case, synovial involvement is isolated.

**CONCLUSION**

Although uncommon, clinicians should consider a diagnosis of fungal tenosynovitis among immunocompromised patients with signs of mild tenosynovitis.

**REFERENCES**

1. Roucoulès J, Gaudouen C. Mycoses articulaires. In : Kahn MF, Kuntz D, Meyer O, Bardin T, Orcel P, Eds. L'actualité rhumatologique, 1999.