

Case Report

Tuberculous tenosynovitis of the flexor tendon of the hand and finger (Middle finger of left hand)

Ali Zein A.A.Alkhoody^{1*} and Ahmed Ali Z. A.A.Alkhoody²

¹Department of Orthopedic and Trauma, El-Minia University Hospital, El-Minia, Egypt

²Department of Orthopedic and Trauma Matay GENERAL HOSPITAL, El-Minia, Egypt

*Corresponding author

Ali Zein A.A.Alkhoody, Department of Orthopedic and Trauma, El-Minia University Hospital, El-Minia, Egypt,

Email: profalzein@yahoo.com

Submitted: 02 August 2014

Accepted: 20 December 2014

Published: 22 December 2014

Copyright

© 2014 Alkhoody et al.

OPEN ACCESS

Keywords

- Tenosynovitis
- Flexor tendon
- Finger

Abstract

A 27 years old man presented with swelling and pain in palmer surface of his left hand with painful extension of middle finger, the case was diagnosed as painful contracture after repeated minor trauma. The patient received medical treatment and local injection of cortisone but the condition not improved. Exploration of the lesion and the mass around flexor tendon in the palm of the left hand was excised; the patient received no specific treatment. After three weeks he developed swelling in the middle finger of his left hand with mild pain and limitation of movement, exploration of the lesion after investigation, The unhealthy granulation tissue around the flexor tendon was excised completely and histopathological study was done and revealed tuberculous infection, patient received long course of anti-tuberculous treatment, the hand function return to its normal level.

INTRODUCTION

Tuberculous tenosynovitis of the flexor tendon of the hand and finger is a rare infectious disease so early it is usually misdiagnosed as a tumor or noninfectious tenosynovitis [1] diagnosis is difficult due to its slow progression and silent symptoms. Tuberculosis may involve the flexor tendon sheaths of the index; ring, and middle fingers but is uncommon. The sheath of little finger is communicating with ulnar bursa only in 50% of subjects so this finger is excluded [kanave 1939] [2] the relationship between trauma and tuberculous tenosynovitis is unclear [3]

Anatomy

Extensor and flexor tendon sheaths have two surfaces: an inner visceral layer adherent to the tendon and an outer parietal layer abutting adjacent structures such as bursa and muscles. In their normal states, the visceral and parietal layers abut one another; in the setting of tenosynovitis the space between the two layers may fill with inflammatory or purulent fluid.

The visceral and parietal layers of most tendons are tightly joined at the ends to produce a closed compartment encased in a tendon sheath. Many tendon sheaths lie in close proximity to adjacent bursae. Therefore, infection in a tendon sheath can spread readily to adjacent bursae as well as other tendon.

Case study

A 27 years old man presented with swelling and pain in palmer surface of his left hand with painful extension of middle finger, plain x-ray was done and the case was diagnosed as painful contracture of the tendon and soft tissue after repeated minor trauma. The patient received medical treatment and local injection of cortisone but the condition not improved. The patient reevaluated and investigated laboratory and radio logically. Exploration of the lesion and the mass around flexor tendon in the palm of the left hand was excised. Histopathological examination showed no specific inflammation (Figure 1a and 1b).

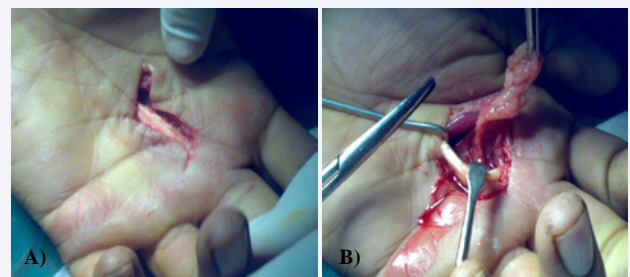


Figure 1 Exploration of the lesion and the mass around flexor tendon in the palm of the left hand was excised.

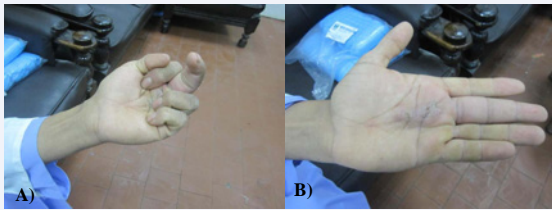


Figure 2 After three weeks of non specific treatment the patient developed swelling in the middle finger with mild pain and limitation of flexion, (Figure 2a and 2b).

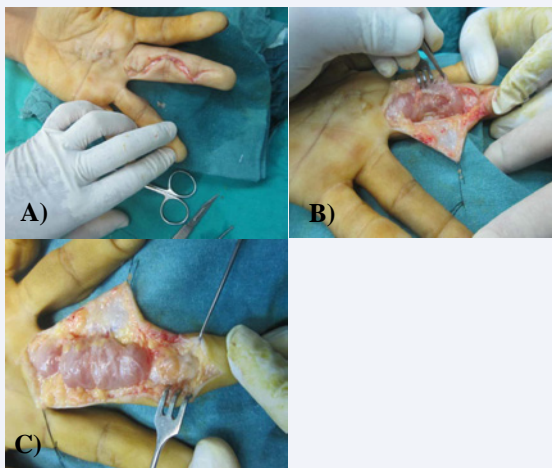


Figure 3 The patient was admitted and exploration of the flexor tendon of the middle finger; the unhealthy granulation tissue around the tendon was excised completely and histopathological study was done and revealed tuberculous infection (Figure 3a–3c).



Figure 4 After complete excision of unhealthy tissue the patient received antituberculous treatment for long period and the result was good. The final follow up show normal hand function (Figure 4a and 4b).

DISCUSSION

Tuberculous tenosynovitis is a rare disease, and it is diagnosed with difficulty until late in its course due to its slow progression and silent symptoms. It is usually misdiagnosed as a tumor or noninfectious tenosynovitis [1] there are two theories about the pathogenesis of tuberculous tenosynovitis: [4]

-direct inoculation

-hematogenous dissemination from a primary focus, Primary tuberculous tenosynovitis is considered an extremely rare

condition, most commonly involving the flexor tendon sheaths of the dominant hand [5]. The differential diagnoses include tenosynovitis caused either by other bacterial pathogens, such as those causing brucellosis, syphilis and atypical mycobacteriosis, or by fungal agents [6]. Other possible etiologies include tumors originating from the synovia such as synovial chondromatosis or pigmented villonodular synovitis. Rheumatoid arthritis, sarcoidosis, amyloidosis, foreign body reaction, and other non-specific tenosynovitis [6]. Almost any long tendon may be affected, but the wrist is the most common site. It has been suggested that trauma and increased use may foster this form of secondary tuberculosis. This is based on the observation that the tendons on the right side of the body were affected twice as often as were those on the left [7] in our case no other systemic lesion was detected. Because about one half of patients are cured by complete surgical extirpation, an operative approach was suggested as the best treatment, There are no data, however, to suggest that additional antituberculous combination treatment according to the current guidelines should be withheld [7]. In our case complete excision of unhealthy tissue around tendon and histopathological study was done and revealed tuberculous infection after that long course of anti-tuberculous drugs give good result with normal hand function.

RECOMMENDATION AND CONCLUSION

- 1- All cases of the hand and fingers diseases must be examined accuracy.
- 2- Investigated laboratory, plain x-ray, MRI and electromyography when needed.
- 3- Don't rush to local injection of corticosteroids. Not only because it masks the symptoms of tenosynovitis, giving the patient a false sense of security, but also because local injection of steroid decreases the tensile strength of tendon and predisposes it to complete rupture.
- 4- Wide excision of the lesion and antituberculous drugs gives good result.

REFERENCES

1. Cramer K, Seiler JG 3rd, Milek MA. Tuberculous tenosynovitis of the wrist. Two case reports. Clin Orthop Relat Res. 1991; 262: 137-140.
2. Kanave 1939; quoted from Tuberculous teno-synovitis L.H.PIMM and W. WAUGH, OXFORD, ENGLAND journal of bone and joint surgery vol.39 B. No. 1 February 1957.
3. Jackson RH, King JW. Tenosynovitis of the hand: a forgotten manifestation of tuberculosis. Rev Infect Dis. 1989; 11: 616-618.
4. Hodgson AR, Smith TK, Gabriel Sister. Tuberculosis of the wrist. With a note on chemotherapy. Clin Orthop Relat Res. 1972; 83: 73-83.
5. Jaovisidha S, Chen C, Ryu KN, Siritwongpairat P, Peksan P, Sartoris DJ, et al. Tuberculous tenosynovitis and bursitis: imaging findings in 21 cases. Radiology. 1996; 201: 507-513.
6. Sueyoshi E, Uetani M, Hayashi K, Kohzaki S. Tuberculous tenosynovitis of the wrist: MRI findings in three patients. Skeletal Radiol. 1996; 25: 569-572.
7. Walker UA, Gutfleisch J, Peter HH. Case Number 23: Tuberculous tenosynovitis. Ann Rheum Dis. 2002; 61: 384.

Cite this article

Alkholly AZAA, Alkholly AAZAA (2014) Tuberculous tenosynovitis of the flexor tendon of the hand and finger (Middle finger of left hand). Ann Orthop Rheumatol 2(4): 1039.