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A Case Report on Largest Compound Palmar Ganglion of Foot: A Rare Manifestation of Tuberculosis

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Abstract: Tenosynovitis of tuberculous origin is uncommon. It is considered a severe form of extra-pulmonary musculoskeletal tuberculosis. The clinical picture is very typical and is always confirmed by histopathology and is best managed in its early stages before spreading to the underlying bones causing destruction. Here, we report a 53-year-old male who presented with painless and progressive swelling in the dorsum of foot over hallux extending over the extensor haullicus longus tendon up to ankle joint. Examination revealed mixed areas of soft cystic and hard areas, with no restriction of movements and no islands of numbness over sural nerve territory. He was diagnosed to have compound ganglion and was treated with debulking tenosynovectomy and was referred to pulmonologist for further management.
Keywords: Compound palmar ganglion, Tuberculosis, Largest, Rare manifestation

INTRODUCTION

Chronic tenosynovitis of tuberculous origin is also referred to as compound palmar ganglion. Its incidence is very less, but it is not uncommon in developing countries. Its clinical picture is typical and histopathological studies are carried out for confirmation. The disease can progress; resulting in a gross destruction of surrounding structures [1]. Thus it requires surgical excision without delay [1, 2].

The flexor sheath of foot is not a common site for tuberculosis. But once infected, it can cause inflammation of all tendon sheaths around the foot and ankle resulting in nerve compression.

It can also lead to destruction of underlying bones if left untreated. For better prognosis, early recognition and complete surgical excision along with appropriate anti-tubercular therapy is important [1].

CASE REPORT

A 53-year-old male agricultural labourer, presented with complaints of an increasing swelling over the dorsal aspect of his left foot. The condition was painless. He had loss of appetite, loss of weight and evening rise of temperature for six months prior to admission. There was no similar history in the family and no history of contact with any tuberculous patient. Examination revealed a large swelling over the dorsal aspect of left foot (Fig. 1) with a positive fluctuation test.

Fig. 1: Clinical picture showing flexor tenosynovitis

Movements of toes and ankle were normal. Radiographs of the foot and ankle were normal without any involvement of the underlying bones. The chest was normal clinically and radiographically. Blood parameters were within normal limits. Mantoux was negative. There was no evidence of immunodeficiency. There were no other detectable foci of infection.

Excision and biopsy was planned and carried out without delay. The skin and fascia along the swelling was incised and retracted. Careful dissection revealed a single continuous fluctuant irregular mass which was 15 x 6 cm, filled with fibrinous material and straw coloured fluid (Fig. 2 & 3). Swelling was excised in total along with excision of inflamed tendon sheaths.

A thorough wash was given and the wound was closed primarily. Histopathology of the specimen revealed inflammatory lesions with large granulomas of epitheloid cells and multiple giant cells with central caseous necrosis (Fig. 4). Toes & ankle mobilization was started immediately postoperatively which was well tolerated by the patient. There were no contractures and the scar remained healthy.

Fig. 2: Single large swelling of tenosynovitis

Fig. 3: A single continuous fluctuant irregular mass which was 15 x 6 cm, filled with fibrinous material and straw coloured fluid

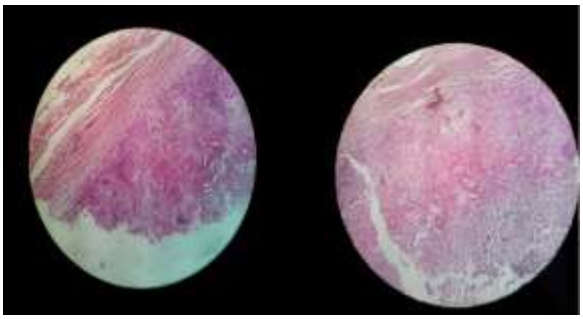

Fig 4: Histology

DISCUSSION

Tuberculosis (TB) is regarded as the second greatest killer worldwide due to a single infectious agent following HIV/AIDS. Individuals with compromised immune systems have a much higher risk of getting affected. Over 95% of cases and deaths due to TB are in developing countries [3].

The two theories for aetiopathogenesis of tubercular synovitis are direct inoculation and haematogenous dissemination from lungs [4].

Though tuberculosis affects various organ systems in the body, involvement of foot is quite rare resulting in delayed diagnosis and confirmation of this clinical entity.

Mycobacterium tuberculosis is the most common causative organism for such an extensive lesion and confirmation is done by culture [5]. Molecular biology techniques can be used for the detection and identification the mycobacteria involved [6]. PCR is sensitive investigation for diagnosis [1].

Diagnosis of this condition becomes quite difficult due to the absence of pulmonary symptoms [1]. Early diagnosis, excisional debridement and appropriate anti-tubercular chemotherapy are needed to overcome this condition and to minimize recurrence [1, 5] and are the reported recommended treatment of choice [6, 7].

The main goal of treatment is interfering with the disease before it involves the underlying bones [1].

CONCLUSION

Possibility of tuberculosis in a chronic tenosynovitis of the foot should always be kept in mind. Thorough evaluation needs to be done pre-operatively to rule out other foci of infection. Early diagnosis is recommended because the disease tends to spread along the tendons and has tendency to destroy the underlying bones. A timely interference could beplanned which would do much good for the patient.

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