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Case Report

Ulnar Nerve Tuberculoma Mimicking as a Ulnar Nerve Schwannoma and Neurofibroma

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Abstract

We report a very rare case of ulnar nerve tuberculoma. A 16-year-old male presented with swelling over ulnar aspect of Right Wrist and tingling sensation on Right hand. Three Years back patient had history of Injury at Wrist. Any Signs and Symptoms indicating Tuberculosis and Leprosy was not found. In order to removed lesion completely, Exploratory Surgery was performed. Histopathological examination of the specimen consisted with tuberculoma.

Keywords: Ulnar Nerve; Tuberculoma; Histopathology; Peripheral Nerve

Introduction

Meningitis and tuberculomas are the main manifestations of tuberculosis involving the CNS. Tuberculomas of the brain and spinal cord are not uncommon. Tuberculoma involving a peripheral nerve is uncommon and only 5 cases are reported in the literature [1-5]. All of the 5 cases reported involved the ulnar nerve, imaging in the form of CT was performed in only 1 case 2, and all patients were managed surgically. In this paper, we report another case of ulnar nerve tuberculoma. Our case is the third case of ulnar nerve tuberculoma with MRI sequences that has been reported in the literature. The literature on this topic is also briefly reviewed with special emphasis on pathogenesis of this lesion.

Case Report

History and examination

A 16-year-old patient presented with Complain of swelling over ulnar aspect of Right Wrist and tingling sensation on Right hand since 1 month. Past History of Injury at Wrist was present. Any Signs and Symptoms indicating Tuberculosis and Leprosy was not found.

MRI of Right wrist near ulnar styloid show soft tissue Granulomatous lesion posteromedial aspect of dorsal branch of ulnar nerve Pure sensory nerve.

Histopathological Examination of the Specimen (Nerve Sheath, Nerve tissue) shows bits of fibro collagenous tissue and nerve tissue with large areas of caseous necrosis surrounded and infiltrated by many granulomas of epitheliod cells; langerhans's type giant cells and mixed inflammatory exudates.

Impression: Caseating Tuberculosis Right ulnar nerve

The Montoux Test was Positive (15mm X 15mm) and Erythrocytes sedimentation rate was 42mm/hr. Acid Fast Bacilli was not found in Zeihl neelsen stain and Lepra stain. Histopathology of Lesion shows features of Ulnar Nerve Tuberculoma.

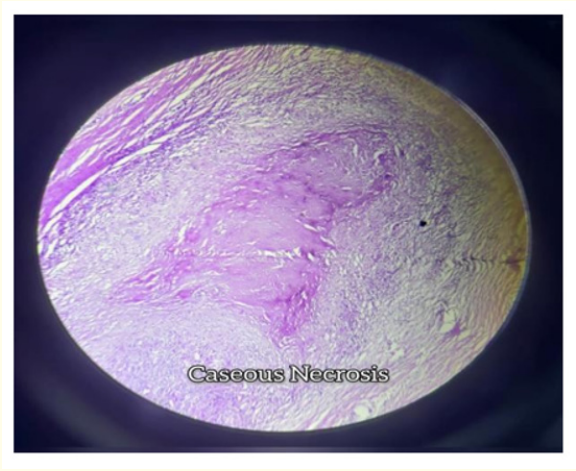

Figure 1

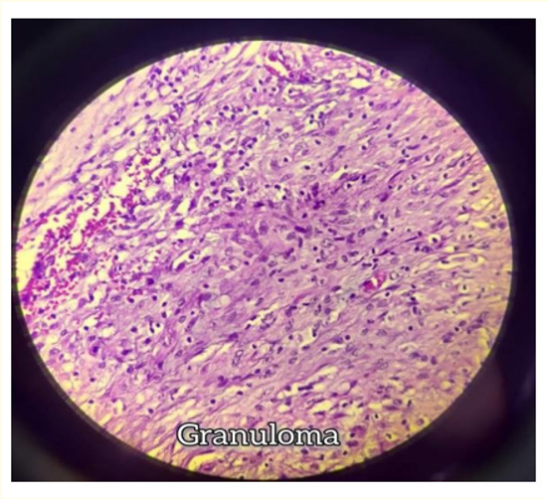

Figure 3

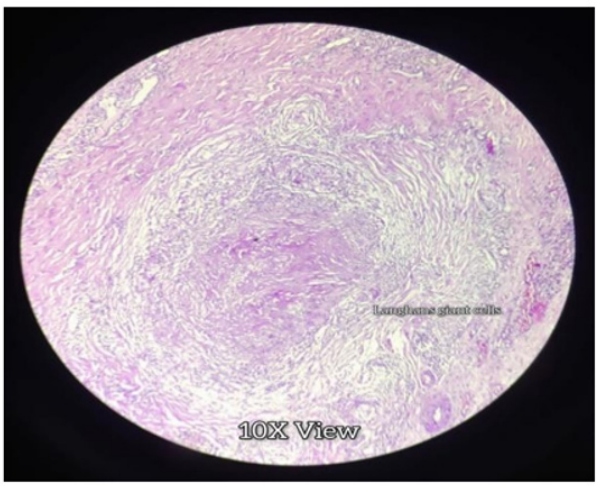

Figure 2

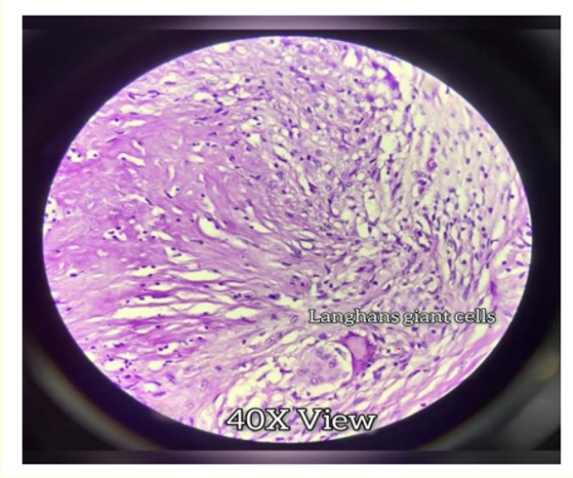

Figure 4

- **Operation:** Exploration, Excision of Nerve Involving of Dorsal Branch of ulnar nerve and Reconstruction of Sural Nerve Graft Right Hand under Branchial Plexus Block under Spinal Anesthesia done.
- **Treatment:** Pathological Dorsal Branch of Ulnar nerve excised and Sural Nerve Grafting done. AKT was started and follow up after 15 days shows improvement.

Discussion

Tuberculoma is a space-occupying lesion which is solitary and Tuberculosis bacillus spread by hematogenous route.[2,5] Cerebellum is the most common site for tuberculoma. Spine involvement is very rare [3,5] and Peripheral Nerve involvement even more uncommon [2-5].

Active Primary focus in some area of body is Secondary for Tuberculoma. By the time a tuberculoma is well formed and displays signs and symptoms, which are mainly due to compression, the primary focus has healed and has become difficult to locate [4].

The pathogenesis of a peripheral nerve tuberculoma is debatable. Tuberculous Bacilli dose not enter in epineurium easily. Peripheral Nerve involvement is always secondary to Hematogenous Spread. Most of the cases primary focus is not found by other diagnostic techniques. In two Cases reported in literature had a contact with tuberculosis and history of local Injury [2,3]. Local trauma not often be responsible for direct entry of the tuberculous bacilli.

It is diffcult to diagnose Peripheral Nerve Tuberculoma prior to operation and on the Basis of only Clinical findings due to uncommon occurance of Tuberculoma of Nerve. Histopathology Examination shows epithelioid histiocytes, granulomas with or without giant cells and central area of necrosis. This Picture led to diagnosis of Tuberculoma. Removing whole lesion along with Intact Capsule plus AKT can result in Good Prognosis. Better correlation with Radiological findings can help in preoperative diagnosis [1]. Primary tuberculous focus was found in only 1 case [4]. In the other 4 reports tuberculous focus was not found [1-5]. Similar to our case. At this Point positive Montoux test in our patient is significant and Positive Montoux test favours the Presence of Primary Focus.

Conclusion

In order to find out exact Pathogenesis of the Nerve Tuberculoma, we need more case report to be publish. With the help of Ancillary test like Chest Xray, TB Gold, Montoux Test, Gene Xpert, ZN Stain and other radiological evidence better understanding of Pathogenesis and Early diagnosis of Peripheral nerve tuberculoma is possible.

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