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An Unusual Presentation of Cutaneous Tuberculosis in Left Index Finger

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Abstract

Cutaneous infections with Mycobacterium tuberculosis with an atypical clinical appearance have become more common. WE report a case of young female child who presented with history of swelling and non- healing ulcer over the left index finger for the past six months. The case was confirmed as Mycobacterium tuberculosis by histopathological examination, culture, and also by CBNAAT. The patient was successfully treated with anti-tubercular treatment

Keywords: Cutaneous tuberculosis, finger, CBNAAT

Introduction

Tuberculosis is a major global health problem. India alone accounts for 1/4th of the tuberculosis burden worldwide (23%) [1]. Extra pulmonary tuberculosis comprises approximately 10% of all the tuberculosis and cutaneous tuberculosis makes up only small proportion of these cases (2%) [2].Skeletal involvement are less reported in tuberculosis and even less likely observed in fingers. Tuberculosis of fingers are rarely involved in adults and is often reported in children under 5 years [3]. Tuberculosis of finger usually presents as a painless swelling of digit initially associated with low grade fever and pain at the site. Other common manifestations can be sinus formation followed by anorexia and weight loss. We report a case of Tuberculosis of left index finger without the involvement of the bone in a immunocompetent patient. The infection successfully resolved following anti tubercular Treatment [4].

Case report

A 17 year old female who came with swelling and a non-healing ulcer over the left index finger since 6months with history of on and off low grade fever. [Fig 1] There was no past history of any trauma or injury and n family history of tuberculosis. On examination left index finger was swollen uniformly and was painful on palpation there was a mediolateral ulcer of 3x2cm with irregular margins with a discharging sinus. There was restriction of movement at Proximal and distal interphalangeal joints of the left index finger.

The patient was subjected for incision and drainage of the left index finger. The x-ray of the finger showed no involvement of the bone and the chest x-ray

showed clear lung fields [Fig 2]. The HIV status of the patient was non-reactive.

Tissue bits from the sinus area were sent for histopathological examination. Small amount of greenish non foul smelling exudates (<1ml) and tissue was sent to Microbiology lab for routine and AFB culture. Gram stain showed numerous pus cells and no organism. Ziehl Neelsen stain showed no Acid fast bacilli. Routine culture yielded no growth. However, the histopathological examination of tissue showed chronic granulomatous inflammation. [Fig3]. On LJ media after 3weeks buff coloured colonies were observed. Exudate was also sent for CBNAAT and found to be positive for Mycobacterium tuberculosis complex sensitive to rifampicin. The patient was referred to RNTCP for Anti Tubercular treatment.

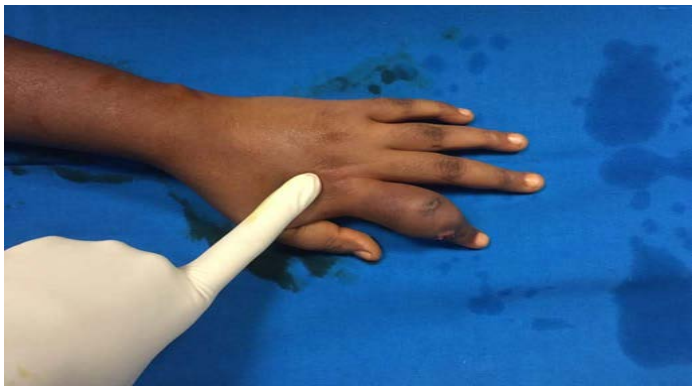

Fig 1. Showing non-healing ulcer over the left index finger.

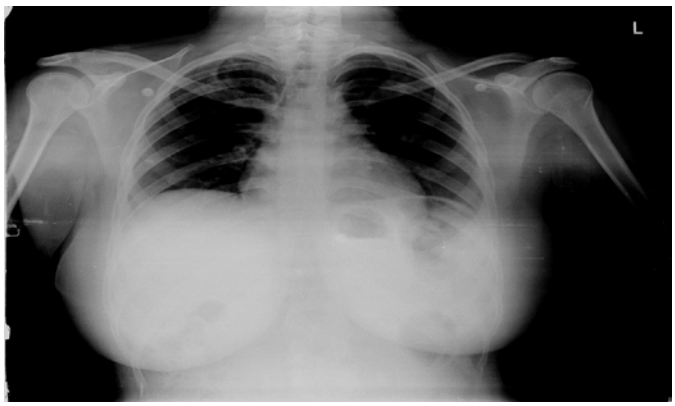

Fig 2. Chest x-ray showing clear lung fields

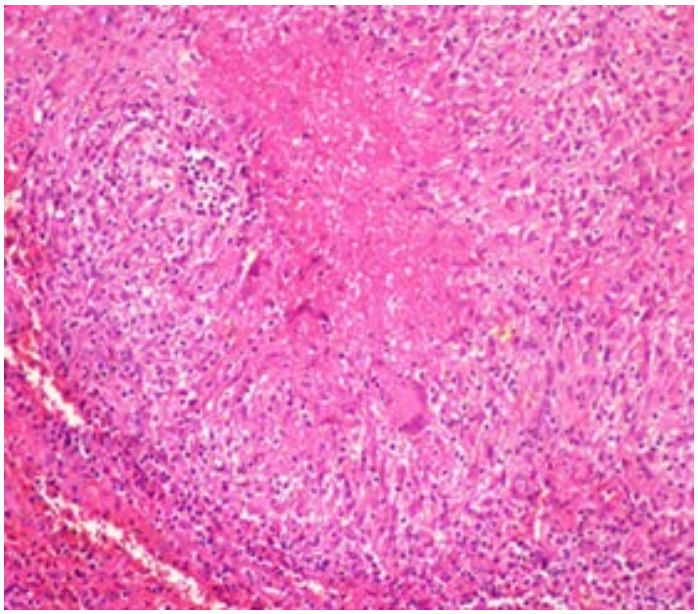

Fig 3. Granuloma formation seen on HPE

Discussion

Cutaneous tuberculosis comprises of only small proportion (< 2%)of all cases of tuberculosis [2]. Atypical mycobacteria(NTM) being more common than Mycobacterium tuberculosis complex in cutaneous and soft tissue infections [5].Tuberculosis involving the soft tissue from adjacent bone or joint is well recognized. Tuberculosis of the soft tissue with underlying bony pathology is rare and the pathogenesis is still confusing. Unusual presentation of tuberculosis in atypical sites leads to delay in diagnoses and treatment in many patients. Cutaneous tuberculosis usually occurs as a result of hematogenous spread and it may manifest as primary extra pulmonary infection or as post primary reactivation. Primary skin infections due to Mycobacterium tuberculosis is also possible and is generally acquired from direct inoculation of tubercular bacilli through skin abrasions or as a occupational disease and is more common in children. The diagnosis of cutaneous Tuberculosis is challenging because clinical presentation vary greatly. In the present case the suspect of Mycobacterium infection was made on the basis of

characteristic histopathological examination and was confirmed on the basis of positive culture of Mycobacterium tuberculosis subsequently by molecular assay [7]. The patient was treated uneventfully.

Conclusion

High degree of suspicion of tuberculosis should be done for all types of swellings and non-healing ulcers.

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