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Tuberculosis of the Talus in a Child - A Rare Entity

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Abstract: A 10 year old boy presented with fever, local swelling around the ankle with tenderness and antalgic gait, without any antecedent trauma or discharging sinus. He had no evidence of pulmonary tuberculosis. Laboratory tests revealed signs of inflammation with normal Mantoux test and chest X-ray. An irregular lytic lesion of the talus was seen on the x-ray of the affected part. Ziehl Nelson staining of the aspirated fluid revealed acid-fast bacilli. Material obtained after curettage and bone grafting confirmed the diagnosis of tuberculosis. He was treated conservatively with splintage and 4 drug anti-tubercular chemotherapy for 18 months, without any residual tenderness or foot deformity at the final follow-up. This case has been reported because of its rarity and atypical clinical presentation.

Keywords: Talus; Tuberculosis; Histopathology.

1. Introduction

Tuberculosis is a major infectious health problem in the developing countries, with cases also being reported from the developed world.[1, 2] It can affect any organ system of the body and bone involvement account for 1–3% of all tubercular cases.[3] Tuberculosis of the bone and joints presents more commonly as an osteo-articular lesion and less commonly as an osseous lesion.[3, 4].

Isolated tuberculosis of talus bone is extremely rare, with only a few cases reported in the literature.[5-7] Isolated bone tuberculosis of the talus is a juxta-articular bacillary inflammation of the bone, usually complicated by ankle joint abscess.⁵ A case of tuberculosis of the talus is reported here for its rarity and atypical presentation.

2. Case Summary

A 10 year old boy presented with fever, local swelling around the ankle with tenderness and antalgic gait, without any antecedent trauma or discharging sinus. He had no evidence of pulmonary tuberculosis. Laboratory tests revealed signs of inflammation with white cell count of 15,000 cells /cc, 9.0 gm% hemoglobin and erythrocyte sedimentation rate of 43 mm at the 1st hour. Chest roentgenogram was normal and Mantoux skin test was negative. The X-rays of the talus showed an osteolytic lesion. (Figure 1) CT Scan revealed incorporation of sequestrum. FNAC was found to be inconclusive due to extensive acute inflammation. Excision biopsy of the mass showed typical epithelioid granulomas with caseous necrosis. (Figures 2 & 3) Acid fast stain was positive for Mycobacterium Tuberculosis. He was treated conservatively with splintage and 4 drug anti-tubercular chemotherapy for 18 months, without any residual tenderness or foot deformity at the final follow-up.

3. Discussion

Tuberculosis of the skeletal system is one of the chief causes of morbidity and mortality in many developing countries.[1] This disease must be considered in the differential diagnosis of single or multiple destructive lesions of the bone and joint. Isolated tubercular osteomyelitis of the foot is a rare entity that can occur at any age.[1, 2] Isolated lesions of the ankle bones often are localized in the calcaneum and the talus. Till date, fewer than 100 pediatric cases have been reported.[5-7] Bacillary localization in the talus is usually secondary and late. [3-5]

The poor nature and character of the symptomatology of the patient leads to difficulty and delay of diagnosis.[2, 4] Biologic inflammatory response is non-specific and can mime septic arthritis.[2] A varied x-ray presentation from

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soft tissue thickening to bone destruction may be present.⁷ Computed Tomography scan and magnetic resonance imaging can help in localization of the disease and its extensive nature with bone destruction.[7, 8] A comprehensive diagnosis is usually based on radiological impression, bacteriologic culture and histologic study of the sequestrum. [1, 5, 9]

The need of the hour is a strong clinical suspicion of tuberculosis, so that early diagnosis and proper management can be carried out. Adequate debridement and anti tubercular chemotherapy for 18-24 months is the appropriate treatment with good results. [10, 11]

4. Conclusion

Tuberculosis of the talus in children is an extremely rare condition. It should be considered in all cases of inflammatory ankle lesions without any specific symptoms. With prompt chemotherapy and early surgery, excellent long term results of this once crippling disease is possible.

5. Legends to Figures

Figure-1. The X-ray of the talus showed an osteolytic lesion.



Figure-2. Photomicrograph of the excision biopsy specimen showed typical tubercular granulomas with langhan's giant cells, epithelioid cells, lymphocytes and caseous necrosis. H & E x10

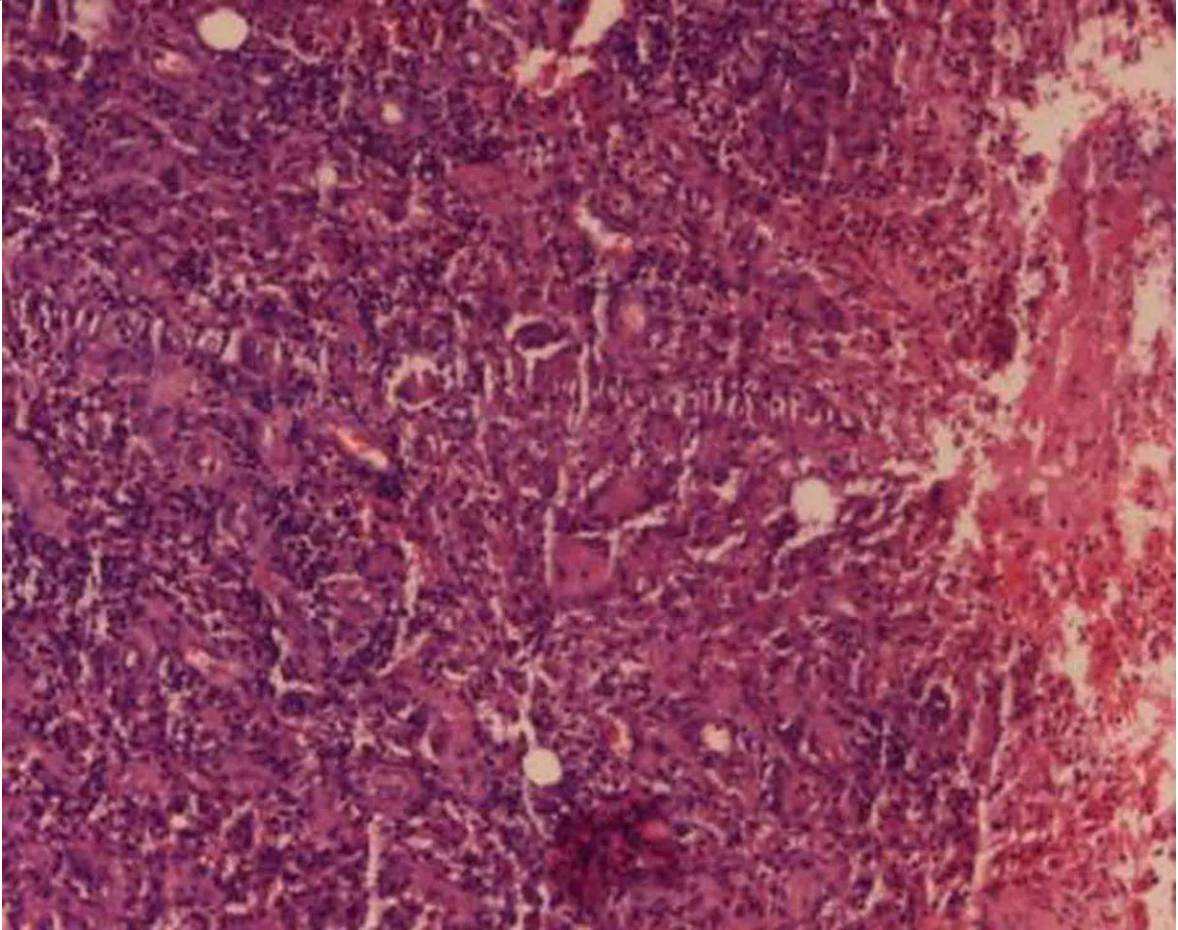
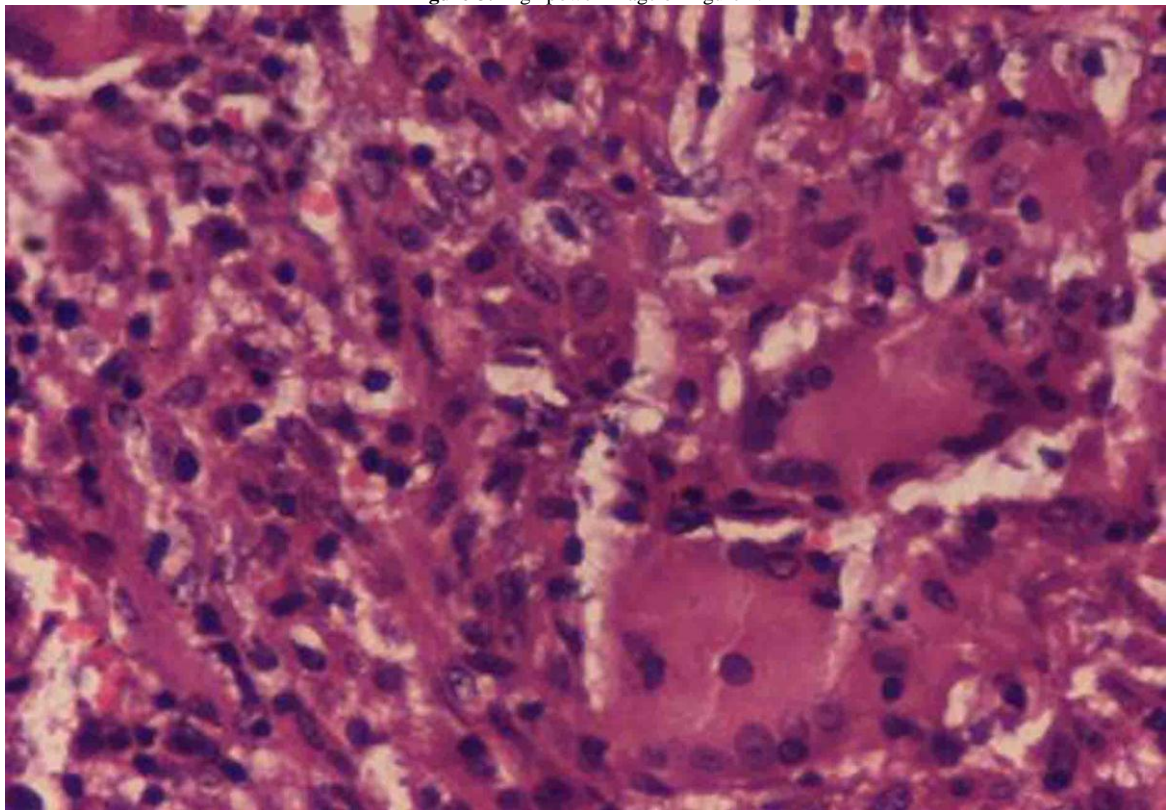


Figure-3. High power image of Figure 2.



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