ISSN: 0975-8585

Research Journal of Pharmaceutical, Biological and Chemical Sciences

A Rare Presentation of Non Ossifying Fibroma– A Case Report.

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ABSTRACT

Nonossifying fibroma is developed in children and adolescents and is usually asymptomatic. It typically arises in the metaphysis of long bone and rarely migrates toward the diaphysis with growth. Nonossifying fibroma is a benign fibroblastic lesion, which is also termed benign cortical defect and fibroxanthoma. A nonossifying fibroma rarely causes problems and does not interfere with healing or growth. The lesions are usually asymptomatic. With growth and remodeling of the bone, the lesion typically disappears and is replaced with normal bone. However, the lesion may weaken the involved bone, causing fracture. We report a very rare case of nonossifying fibroma involving diaphysis alone in a 10 year old girl with fracture at the site of lesion. Written, informed consent was obtained from the patient and her parents to publish this case report, including the images.

Keywords: Non ossifying fibroma, Diaphysis, Metaphysis, Proximal tibia

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ISSN: 0975-8585

INTRODUCTION

Non-Ossifying Fibroma is a common benign Bone Tumour; Its Incidence is about 20% of benign tumours. It is Developmental condition in which, Nest of Fibrous tissue appears within the bone and persists for some years before ossifying. It is asymptomatic and is always encountered in children of age group 10-15years.More common in male than female, sometimes found as an incidental finding in X-ray. These are not seen beyond 30 years, as they spontaneously heal gradually filled in by bone. Commenest site are metaphysis of long bones mostly of lower limb. (Femur,tibia), They might be seen as multiple lessions.

CASE REPORT

10 years old female student presented with complaints of continous, vauge aching pain in the middle part of the right leg for 6 months, not relieved by rest, history of trivial Injury to Right knee one month ago, since then patient was limping, No other significant history noted. General and physical examination found to be normal. Local examination of leg revealed diffuse Swelling over proximal leg, Right side, extending from, 5cm below knee joint line to about 15cm distally, Skin colour is normal but stretched, diffuse swelling, immobile, with indistinct edges and Tenderness present over the swelling it is hard in consistency, no limb length discrepancies present, limping gait present. No regional lymph nodes palpable**.** Rom in knee are full and free. No other swellings noted. Routine blood investigations, serum calcium, phosphorus and alkaline phosphatase are normal.

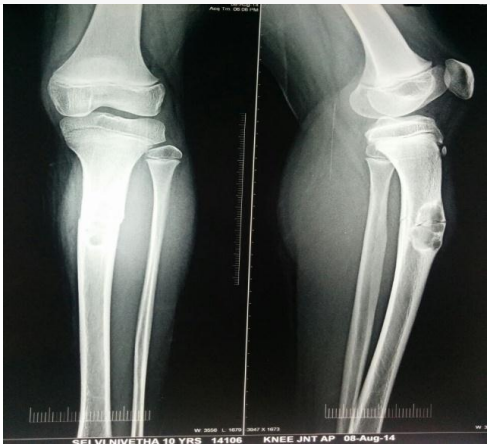

Figure 1: Antero-posterior (left) and lateral (right) plain radiographs of leg show a well-defined osteolytic lesion in the medullary space with cortical thinning in tibial diaphysis (A)

Figure 2: Magnetic resonance imaging shows a medullary lesion well defined osteolytic lesion with sclerotic margins visualized in the proximal diaphysis of tibia. The lesion appeared from cortical base

ISSN: 0975-8585

X-Ray

Reveals a sharply demarcated, asymentrical, multiloculated cortically based lucencies, with thin sclerotic rim. Which are located in proximal diaphysis of right tibia.(fig 1) . MRI leg shows well defined osteolytic lesion with sclerotic margins visualized in the proximal diaphysis of tibia. The lesion appeared from cortical base. Suggestive of non ossifying fibroma. A pathological fracture visualized in the cranial aspect of the lesion.(fig 2) Curettage, TENS nailing and bone graft were performed . The pathological diagnosis of the mass was found to be Non ossifying fibroma, and the diaphyseal location is atypical for nonossifying fibroma, which made diagnosis challenging. Post operatively after 6 weeks fractured healed and patient started walking and implant exit was performed.(fig 3)

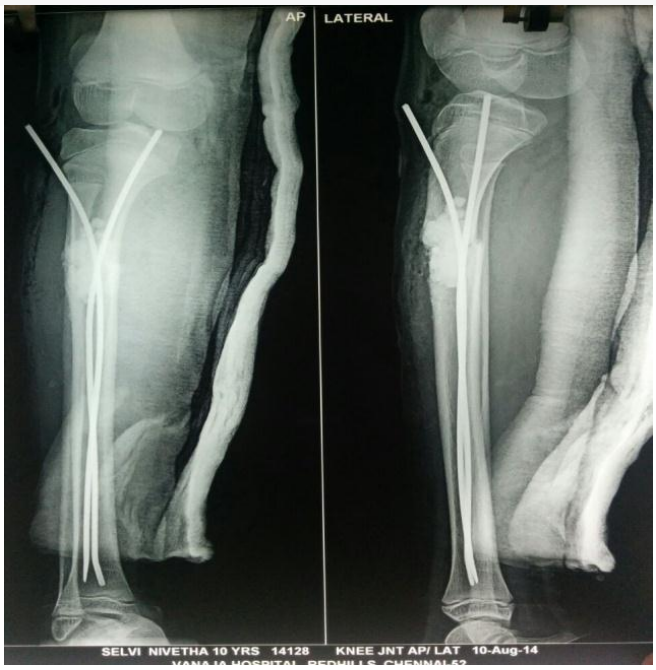

Figure 3: Antero-posterior (left) and lateral (right) plain radiographs of leg show immediate post op status , in which curettage, TENS nailing and bone grafting are done(A).

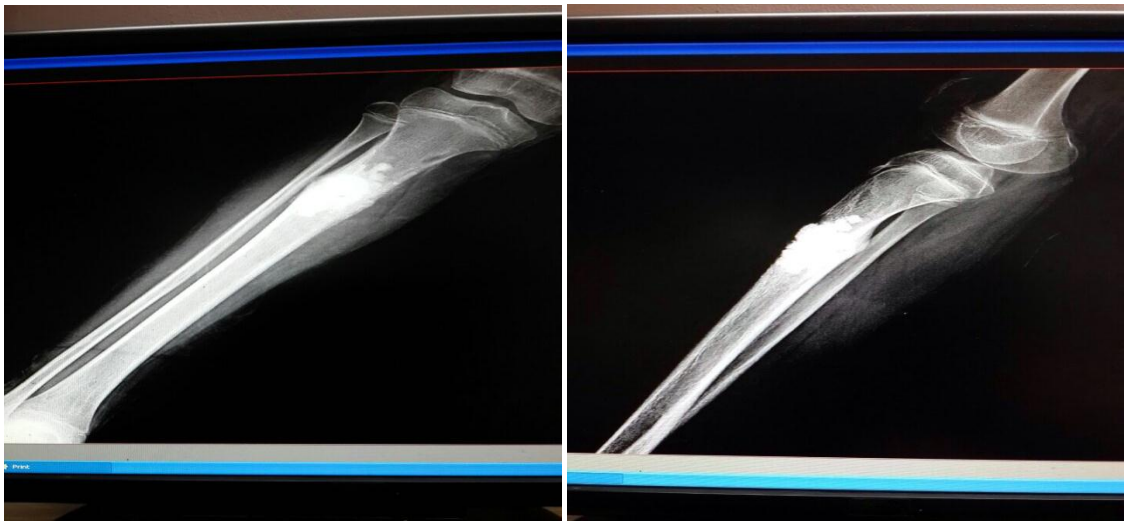

Figure 4: Antero-posterior (left) and lateral (right) plain radiographs of leg show 6 weeks post op after implant exit.

ISSN: 0975-8585

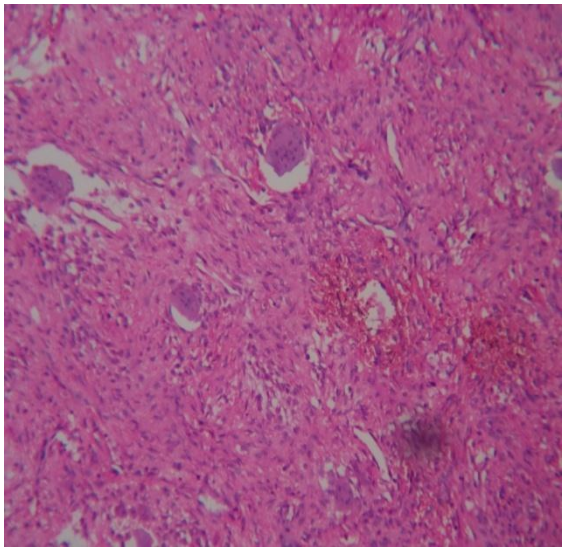

Figure 5: Histopathology examination shows a highly cellular pcontaining spindle shaped cells on background of stromal tissue in prominent storiform pattern. Foamy histiocytes and scattered multinucleacted giant cells.

CONCLUSION

The current case is a reminder to clinicians that, although rare, nonossifying fibroma can occur in the diaphysis alone, withouts its presence in metaphysic of long bones.

DISCUSSION

Typically, the diagnosis of NOF can be easily made based on images and clinical findings [3,7]. The natural course of NOF is self-limiting involution and, thus, NOF has come to be known as a 'don't touch' lesion because more aggressive diagnostics or treatment are unnecessary [1]. It has been reported that NOF can be found in approximately 30% of young individuals within the first and second decade of life [2]. On plain radiographs, NOF appears as a small, cortically based osteolytic lesion with a thin sclerotic rim. Histologically, NOF is composed of spindle-shaped fibroblasts, multinucleated giant cells, and foamy histiocytes [2]. In this case, NOF was located at the tibial diaphysis, but the typical location of NOF is the metaphyseal region. According to Brenner and colleagues [8], NOF can be divided into three phases on the basis of the intensity of uptake on bone scan: active, healing, and inactive. The low uptake, combined with the diaphyseal location, may suggest the current case was a long standing lesion in the inactive phase. The diaphyseal location made it difficult to arrive at the correct diagnosis of NOF based on the imaging results.

Abbreviations

NOF: Nonossifying fibroma.

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