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TITLE: A CASE REPORT OF SYMPTOMATIC NON-OSSIFYING FIBROMA IN LEFT DISTAL END OF FEMUR

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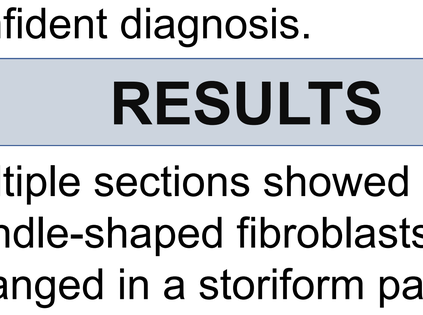
INTRODUCTION

Non-ossifying fibromas (NOFs) are common, benign, self-resolving metaphyseal lesions seen in children and adolescent, with a prevalence of up to 30–40% in skeletally immature patients. They are eccentrically located in long bones and may involve the cortex without breaching it. NOFs and fibrous cortical defects differ mainly in size and are collectively referred to as metaphyseal fibrous defects, with their characteristic appearance usually allowing a confident diagnosis.

RESULTS

Multiple sections showed bland spindle-shaped fibroblasts arranged in a storiform pattern, with scattered osteoclast-like multinucleated giant cells. Foamy macrophages and haemosiderin-laden macrophages were also noted. These features were consistent with a diagnosis of **non-ossifying fibroma**.+



METHOD

An 18-year-old female presented with a 6-month history of intermittent, progressively worsening pain and diffuse swelling over the distal thigh. The pain was non-radiating and relieved with rest, with no associated constitutional symptoms.

Clinical examination revealed a diffuse, non-mobile, tender swelling over the distal thigh with normal overlying skin and no vascular signs; knee range of motion was preserved. Plain radiographs showed a well-defined, eccentric, multiloculated lytic lesion with sclerotic margins in the metaphysis of the left distal femur.

An initial diagnosis of osteoid osteoma was considered; however, a trial of salicylates was ineffective. Subsequent CT imaging suggested a differential diagnosis of non-ossifying fibroma, chondromyxoid fibroma, or osteoid osteoma. Based on these findings, the patient underwent surgical excision biopsy with bone graft augmentation.

DISCUSSION

Fibrous Cortical Defects & Non-Ossifying Fibromas

Fibrous cortical defects (FCDs) are the most common benign bone lesions in children and are often detected incidentally. They are small (1–2 cm), well-defined intracortical metaphyseal lesions with a sclerotic rim, most commonly involving the distal femur, proximal tibia, and fibula.

Non-ossifying fibromas (NOFs) are the larger variant, presenting as eccentric, radiolucent metaphyseal lesions, usually >4 cm and extending into the medullary cavity.
Both lesions are typically asymptomatic but may present with pathological fractures, particularly in active children. Most fractures heal with immobilization. Small lesions require observation, while larger weight-bearing lesions may need curettage and bone grafting to prevent fracture.

CONCLUSION

Non-ossifying fibroma is a benign fibrous tumor commonly seen in children and adolescents, typically involving the long bones near the knee. Standard treatment for large lesions or those with pathological fractures involves curettage and bone grafting. In this case, the patient was symptomatic, with significant symptom relief following tumor excision.