

# Difficulty In The Diagnosis Of Osteoid Osteoma In Children: A Case Report

Chua CG; NF Yasin; VA Singh

Department of Orthopaedic Surgery, Faculty of Medicine, University of Malaya, Kuala Lumpur

## INTRODUCTION:

Osteoid osteoma is a painful benign bone lesion that is commonly seen in children, adolescent and young adult, between the age of 5-30 years-old<sup>1</sup>. It has a characteristic osteoid-rich nidus surrounded by a dense rim of sclerosis. It causes an extensive periosteal reaction that make it indistinguishable from the bone infection and other bone malignancy, such as Ewing sarcoma.

## CASE REPORT:

A 5 years old pre-morbidly healthy and active boy presented with limping gait and pain at right thigh since 8 months ago. On examination, his right thigh was swollen, tender and the swelling was hard in consistency. The radiograph showed mid-diaphysis periosteal reaction with cortical thickening and onion peel appearance. There was no obvious nidus seen. Core needle biopsy and bone culture were negative. He was treated as chronic osteomyelitis of right femur with antibiotic but his symptoms did not improve. Thus, CT scan was done and it showed a nidus with surrounding sclerosis at mid diaphysis of right femur, which was consistent with the diagnosis of osteoid osteoma. He was treated with radiofrequency ablation of the lesion under CT guidance. Since then, the symptoms resolved and there was no recurrence for him.



Fig.1: Radiograph right femur (AP view), showing significant periosteal thickening with onion peel appearance



Fig. 2: CT scan right femur (sagittal view) showed the nidus with cortical thickening

## DISCUSSIONS:

Osteoid osteoma is the third most common benign bone lesion in young patient<sup>2</sup>. The pain is classically alleviated by aspirin or NSAIDs and cured by the removal of the nidus. Radiofrequency ablation under CT guided is a good and less invasive method for precise and complete excision of the tumour.

## CONCLUSION:

The diagnosis of this tumour can be difficult and tricky and the differential diagnosis includes malignancy and infection. CT scan should be done early and it is the investigation of choice in the management of osteoid osteoma<sup>1</sup>.

## REFERENCES:

1. Virayavanich, WR et al. 2010, Osteoid osteoma of the femur in a 7-month-old infant treated with radiofrequency ablation. *Skeletal Radiol*, 39, (11): 1145-1149.
2. Greenspan, A. 1993. Benign bone-forming lesions: osteoma, osteoid osteoma, and osteoblastoma. Clinical, imaging, pathologic, and differential considerations. *Skeletal Radiol*, 22, (7): 485-500.