

## CASE STUDIES

# An unusual case of hip pain in a child: Osteoid osteoma

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### Introduction

Osteoid osteoma is a rare benign primary bone forming tumor, usually affecting male children and adolescents.<sup>1</sup> It accounts for only 3% of primary bone tumors.<sup>2</sup> We present here the case of an 8-year-old child with osteoid osteoma who was misdiagnosed initially as having osteomyelitis and fracture of femur at the primary care level.

### Case report

An 8-year-old male child presented with a history of pain in the left hip for the past 5 months. The pain, which was insidious in onset and slowly progressive over 3 months, caused difficulty in squatting, limping, walking and playing. The history also revealed the presence of intermittent fever of similar duration, mostly in the evenings. Pain or swelling in any of the joints, weight loss or loss of appetite, and previous incidence of gastrointestinal or genitourinary infection were not reported. There was no history of trauma, previous requirement of blood transfusions, or family history to suggest hemoglobinopathies. An initial consultation of an orthopedic surgeon had diagnosed the condition as left hip septic arthritis, and started oral levofloxacin and non-steroidal anti-inflammatory drugs (NSAIDs). The treatment had resolved the fever, but the pain persisted. Pain episodes were more in the nights and woke him up from sleep. But they respond well to NSAIDs. Computerized tomography of the hip had been reported as undisplaced fracture of left femoral neck with surrounding sclerosis, and he had been referred to our centre.

Physical examination revealed that the child was active and playful, and had normal height and weight. There was no pallor or lymphadenopathy. Musculoskeletal examination

revealed restricted internal rotation of the left hip and systemic examination was normal.

Review of investigations showed mild normocytic and normochromic anemia. Hemoglobin was in the range 11.3 to 11.8 gram%. Total leucocyte count was between 8200 to 10700/mm<sup>3</sup>, absolute neutrophil count varied from 4120 to 6420/mm<sup>3</sup>, and absolute lymphocyte count was in range of 2730 to 3400/mm<sup>3</sup>. Platelet count varied from 1.6 lakh to 2.15 lakh/mm<sup>3</sup>. ESR was 45 mm/hr and no eosinophilia was reported.

Review of X-ray of the pelvis (Fig. 1) showed a lytic area with sclerotic margins in the left femoral neck, with a central sclerotic nidus. Review of the tomography of the hip (Fig. 2) showed typical features of osteoid osteoma.

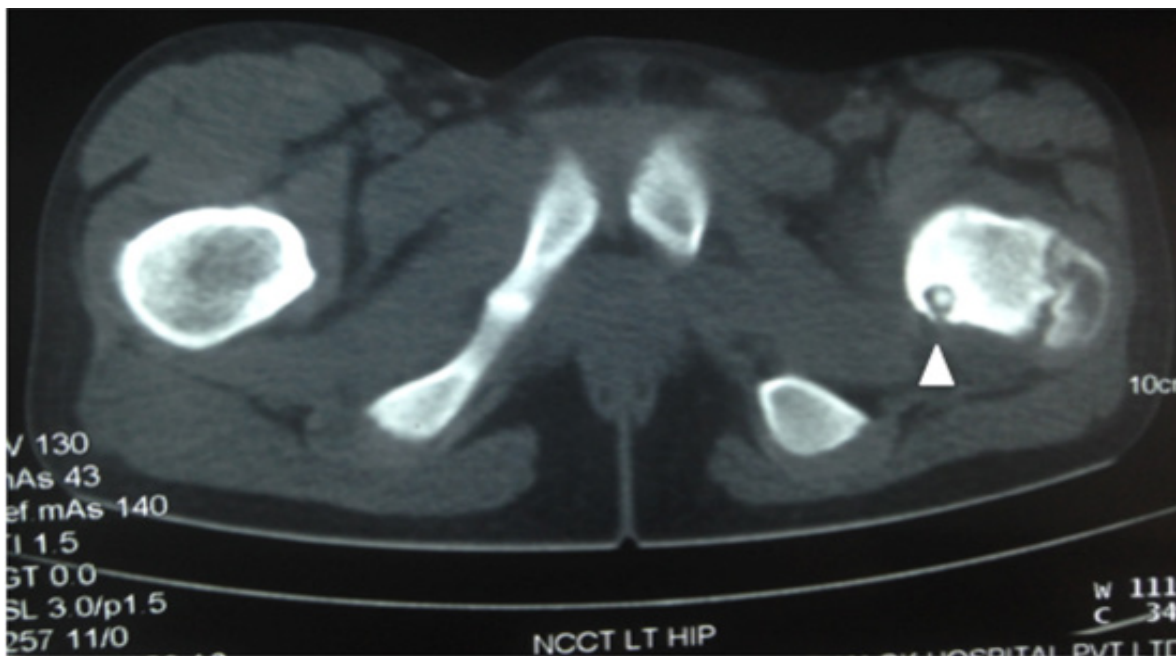
### Discussion

Osteoid osteoma, a benign osteoblastic tumor, is generally a malignancy of the young. Proximal femur and tibia are the commonest sites of osteoma. Pain is one the typical symptoms of osteoma, which becomes worse during nights and responds very well to NSAIDs. This is a consequence of high levels of local prostaglandin production within the tumor.<sup>3</sup> Radiography is characteristic, with a central hypodense nidus surrounded by sclerotic margins. In the context of suggestive history and characteristic radiology, histopathology is not essential for diagnosis. Management comprises analgesia with NSAIDs. Surgical resection is recommended if pain is intolerable, resulting in limp or activity limitation.<sup>4,5</sup> The current case was initially misdiagnosed at the primary care level as osteomyelitis, and fracture of femur. It is important to recognize this benign

**Fig.1: X-ray of pelvis showing lytic lesion with sclerotic margins and central hyperdense nidus in the neck of left femur (black arrowhead)**



**Fig. 2: Computerized tomogram of hips showing lesion in left femoral neck (white arrowhead)**



entity as a cause of joint pain in a growing child, to avoid unnecessary invasive investigations or treatment with antibiotics.

**Competing interests**

The authors declare that they have no competing interests.

**Declaration of interest**

None

**Citation**

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### References

1. Frassica FJ, Waltrip RL, Sponseller PD, Ma LD, McCarthy EF, Jr. Clinicopathologic features and treatment of osteoid osteoma and osteoblastoma in children and adolescents. *Orthop Clin North Am.* 1996;27(3):559-74.
2. Atesok KI, Alman BA, Schemitsch EH, Peyser A, Mankin H. Osteoid osteoma and osteoblastoma. *J Am Acad Orthop Surg.* 2011 Nov;19(11):678-89.
3. Kaweblum M, Lehman WB, Bash J, Grant AD, Strongwater A. Diagnosis of osteoid osteoma in the child. *Orthop Rev.* 1993;22(12):1305-13.
4. Orłowski JP, Mercer RD. Osteoid osteoma in children and young adults. *Pediatrics.* 1977;59(4):526-32.
5. Athwal P, Stock H. Osteoid osteoma: a pictorial review. *Conn Med.* 2014;78(4):233-5.