

# Osteoma Osteoide of Acetabulum: An Unusual Cause of Skeletal Pain

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## ABSTRACT

Osteoid osteoma is a benign bone tumor that, due to the variability of its location and the pain characteristics, can mimic the pathologies most frequently found in clinical practice. An acetabular location is rare, accounting for less than 1% of all cases. This is a case of a 16-year-old male who starts painful complaints in his left hip, nocturnal recrudescence, without morning stiffness. No changes in the physical examination were objectified, conventional radiography and echography of the hip and left lower limbs revealed no significant changes. One year later was referenced for consultation of Pediatric Rheumatology. He performed bone scintigraphy that identified a focus of radiopharmaceutical hyperfixation, located on the left acetabulum, very suggestive of osteoid osteoma. He was directed to Orthopedics to do radiofrequency ablation of the lesion. The persistence of skeletal pain pictures with a characteristic pain pattern, in the absence of other pathologies, should alert the Family Doctor to the eventuality of this pathology and its early orientation.

**Key words:** Acetabulum, osteoid osteoma; skeletal pain

## INTRODUCTION

**O**steoma is a benign bone tumor that occurs preferentially in children and adolescents, being 3 times more frequent in males than in females, with an approximate ratio of 3:1.<sup>[1]</sup>

It is an injury that occurs not infrequently in any part of the skeleton, especially in the diaphyses of long bones and especially in the tibia and femur. An acetabular location is rare, accounting for <1% of all cases.<sup>[2]</sup>

Lower limb pain, especially in children and adolescents, is attributable to various musculoskeletal disorders specific to this age group. Recognition of this condition should be considered if the clinical presentation is suggestive, especially after exclusion of the most common causes.

Given the rare location of this tumor and the clinicality so suggestive of a benign bone tumor, the importance of

a detailed and accurate clinical history for the suspicion/diagnosis of these cases is emphasized.

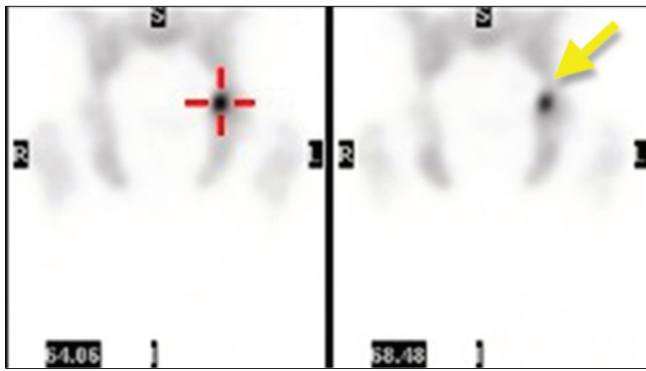
## CLINICAL CASE

In 2015, a 16-year-old boy, soccer player, without relevant previous medical history, presented with pain in his left hip and thigh, predominantly nocturnal and limiting his sports' practice. The patient was first observed by an orthopedic surgeon for his musculoskeletal symptoms. The clinical evaluation was unremarkable, without limitation of hip movements. The plain radiographs of his left hip, leg and knee, and hip ultrasound did not show any visible lesion. During this time, he was treated with nonsteroidal anti-inflammatory drugs, without significant relief. After 1 year of persistent pain, he was observed by a pediatric rheumatologist. The patient denied previous trauma, weight loss, night sweats, or other associated signs and symptoms.

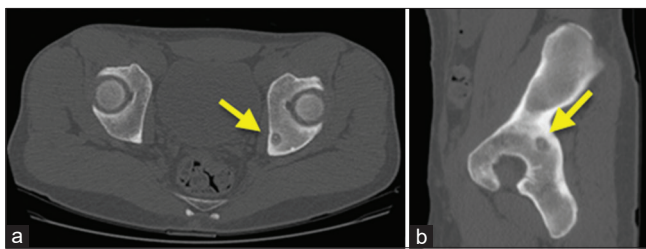
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**Figure 1:** Scintigraphy: “Hyperfixation focus of radiopharmaceuticals, located in the left acetabulum, very suggestive of osteoma osteoid”



**Figure 2:** (a and b) Computed tomography: “In the posterior pillar of the left acetabulum, we observe a cortical hypodense image with about 10 mm, with a discrete sclerotic border and small central density, aspects compatible with osteoid osteoma”

The clinical history was suggestive of osteoid osteoma, so a scintigraphy was requested. It showed a radiolucent focus located in the left acetabulum, compatible with the suspected diagnosis [Figure 1]. The hip computed tomography (CT) scan performed afterward confirmed the osteoid osteoma diagnosis [Figures 2a and b]. He was again referred to orthopedics to perform the excision of the tumor by minimally invasive radiofrequency.

## DISCUSSION

Occasionally, benign bone tumors may be discovered incidentally when a radiography is taken for another reason. Although bone tumors are not caused by trauma, an injury can sometimes cause a tumor to start hurting.<sup>[1]</sup>

In children and/or adolescents with bone pain complaints of nocturnal predominance, asymmetric, and unrelated to exercise or trauma, we should always suspect of a benign bone tumor such as osteoid osteoma.<sup>[2]</sup> It is a primary benign, bone-forming tumor of the growing skeleton, more frequently seen in the first two decades of life. Despite causing pain or discomfort, it is usually small with no tendency to grow or to invade<sup>[3]</sup> adjacent structures.

An acetabular location of osteoid osteoma is rare and represents <1% of cases. Males are 3 times more affected in comparison with female<sup>[4]</sup> gender. CT is the gold standard for diagnosis and the treatment is surgical. A new minimally invasive technique such as CT radiofrequency ablation presents as an excellent option for tumor removal.<sup>[5]</sup> In this technique, the tumor core is heated and destroyed with a high-frequency electric current. In most cases, only one radiofrequency session is required and preserved the sciatic nerve and triradiate cartilage with a good outcome.<sup>[6,7]</sup>

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