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Osteochondroma Of Ischio-Pubic Branch, A Case Report

L'osteochondrome De La Branche Ichiopubienne, A Propos D'un Cas

***M. OUAHIDI, H. BOUSBAA, M. BENNANI, H. ZEJJARI, J. LOUASTE, L. AMHAJJI**
****M. SINAA**

ABSTRACT

The authors report a case of osteochondroma of the ischiopubic branch in a 21-year-old young man who is a rare entity whose true incidence is unknown. It is usually present at the age of growth or after skeletal maturity. It is usually in the form of a solitary process and is rarely part of multiple hereditary exostosis. Vasculoneural compression, aesthetic deformation or malignant transformation into chondrosarcoma are indications of excision. An assessment based on preoperative radiographs, a CT scan and an MRI should first be carried out to assess the extent and measure the cartilaginous capsule of the osteochondroma for better management based on block excision.

Keywords: osteochondroma, ischio-pubic branch, chondrosarcoma

Conflict of interest: The authors do not declare any conflict of interest in relation to the writing of this article
Departement of Orthopedic and Traumatology, Military Hospital Moulay Ismail BP 50000 Meknes, Morocco

RESUME

Les auteurs rapportent un cas d'ostéochondrome de la branche ischiopubienne chez un jeune homme de 21 ans. C'est une entité rare dont l'incidence réelle est inconnue. Il est généralement présent à l'âge de la croissance ou après la maturité squelettique. Il se présente généralement sous la forme d'un processus solitaire et fait rarement partie de la maladie exostosante. La compression vasculoneurale, la déformation inesthétique ou la transformation maligne en chondrosarcome representent les principales indications à l'excision. Une évaluation basée sur des radiographies préopératoires, un scanner et une IRM doit d'abord être réalisée pour etudier l'étendue de la tumeur et mesurer l'epaisseur de la capsule cartilagineuse et ce pour une meilleure prise en charge basée sur l'excision en bloc.

Mots-clés: ostéochondrome, branche ischio-pubienne, chondrosarcome

INTRODUCTION

Osteochondromas rarely develop in places such as the scapula, feet, hands and pelvis and are more common in the distal femur, proximal tibia (osteochondromas are frequently found in the knee) and proximal humerus (in the metaphyses of long bones.) Pelvic localization accounts for five percent of all osteochondromas. (1) Even more rarely, the localization at the level of the pubic branch is an atypical entity and its real incidence is not known and only a few cases are described in the literature. Osteochondromas are benign tumors that can be pediculated or sessile and come from small cartilaginous nodules of the periosteum and can be multiple and part of a multiple hereditary exostosis. The management of this tumor is

surgical excision en bloc in case of compression symptoms or for aesthetic reasons. (2) Pelvic osteochondroma can occur as crural or sciatic neuropathy or compressive symptoms of the femoral or pelvic artery, urethra, bladder or other vital structures.

CLINICAL CASE

A 21-year-old man is admitted for pain and mass in the inner side of the left thigh with partial functional impotence for four years, which was initially insidious, small in size initially but has increased since. The patient came to ask for a management in view of the aggravation of his symptomatology and before the appearance of unbearable functional impotence.

On examination, there was a hard bone mass of 7×5 cm in size on the inner side of the root of the left leg fixed and immobile compared to the deep planes. The skin facing the mass was free and mobile. The patient had no other mass elsewhere in the body. An X-ray showed a bone mass compared to the small trochanter with a heterogeneous cross-sectional diameter of 5 cm and an irregular and sharp periphery (Figure 1).

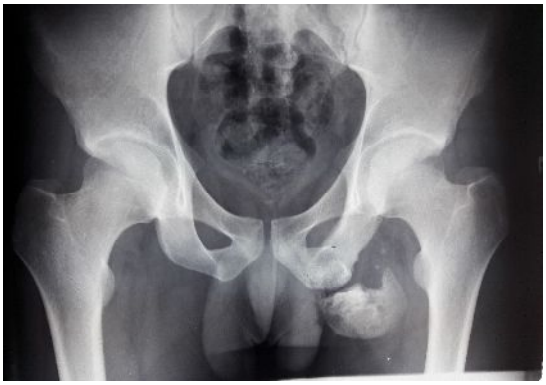

Figure 1: X ray showed the osteochondroma

CT scan showed a hypertrophy of the left ischio-pubic branch, with heterogeneous density, in continuity with a cortical ossification respecting the small trochanter, which simulated the appearance of an exostosis of the ischium (Figures 2, 3).

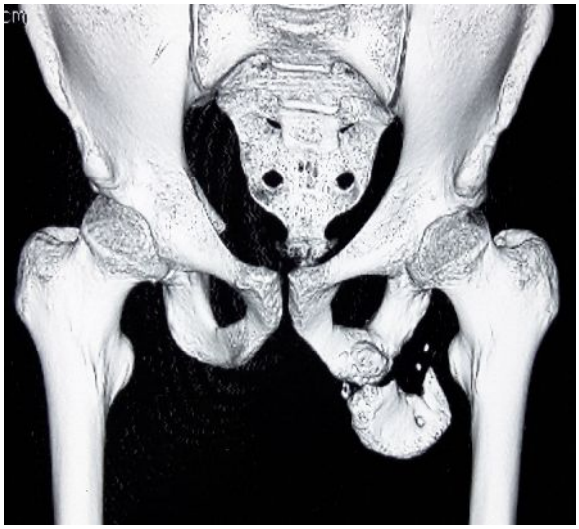

Figure 2: CT scan 3D

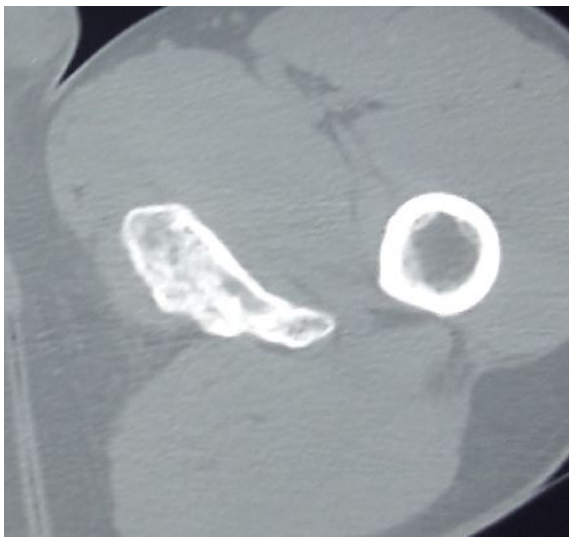

Figure 3: CT scan axial section

Magnetic resonance imaging with axial T1, axial and coronal T2FS sections (Figures 4, 5, 6) showed a bone outgrowth of 45 × 42 × 46 mm diameter regarding the ischial

limb with a seven mm cartilage cap Without vasculo-nervous compression.

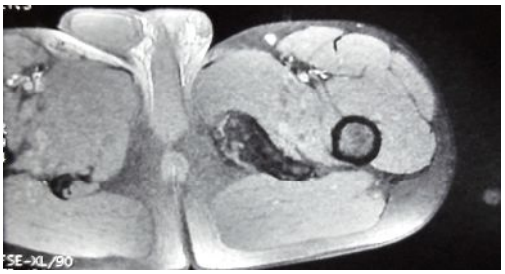

Figure 4: MRI axial section T1

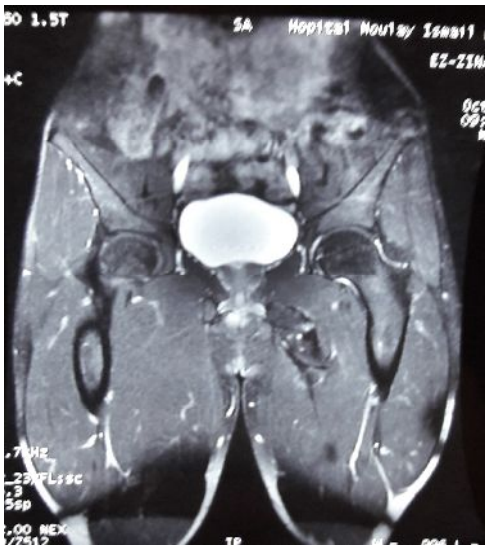

Figure 5: MRI coronal section T1

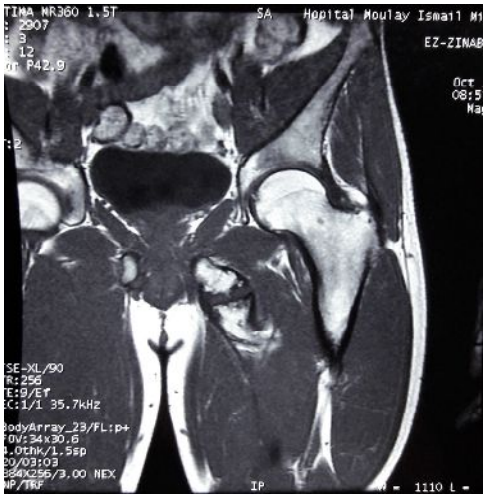

Figure 6: MRI coronal section T2FS

The patient was taken for a complete excision. The installation is done in supine position after spinal anesthesia, and the left lower limb is painted and abducted for better exposure (Figure 7). An extended ilio-inguinal approach of LUDLOFF was performed with a cleavage plane between the adductor and small adductor in front, internal right and major adductor posteriorly. As the soft tissue was retracted, the cartilaginous plug of the osteochondroma was observed. It was excised as a block after dissection (Figure 8). The closure is carried out plane by plane on an aspirating drain.

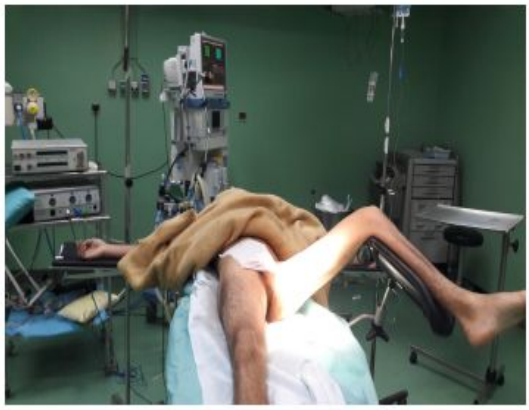

Figure 7:
a- installation on table after spinal anesthesia
b-Approch of Ludloff
c-after the soft tissue was retracted, the osteochondroma was observed

Histopathology confirmed that it was a benign osteochondroma without undifferentiated cells (Figures 9). Since then, there has been no recurrence.

DISCUSSION:

Osteochondroma is a benign tumor considered to be an abnormality in the development of cartilage growth whose etiology is unknown, and several theories have been suggested such as Virchow's theory, Muller's theory, Keith's theory and others. (3). They develop at the age of the skeletal maturity. Injuries and inflammation have been suggested as contributing factors. They can also appear in many hereditary exostoses considered as

associated with EXT1 and EXT2 genes. (4)

The most common sites are the metaphysis of long bones such as distal femur, proximal tibia and proximal humerus and are rarely symptomatic. They are rarely found on other sites.

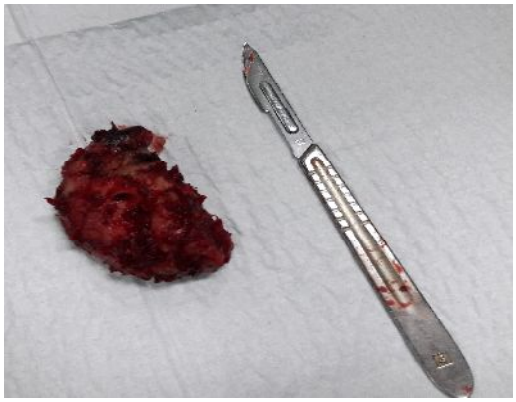

Figure 8: excision as a block 4,5cm*4,5*2cm

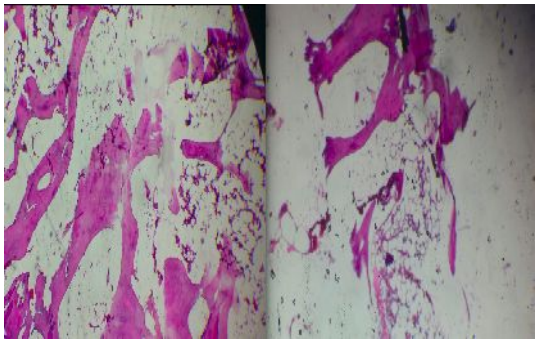

Figure 9: hystopathology confirmed that it was benign osteochondroma without undifferentiated cells

The pelvic localization involving iliac bone has been reported in the literature for compression and had to be removed (5). Similar cases have been reported by Kumar S et al (6). Osteochondroma of the pubic symphysis has been described in urethral compression (7) and another with vulvar esthetic discomfort has been treated by surgery (8). Rarely, it can turn into chondrosarcoma. Various studies have shown that increasing the size of the cartilaginous capsule by 2 cm after skeletal maturity is a predictor of a high risk of malignant transformation (9-12). So the most common symptoms are pain, aesthetic discomfort and sometimes compression of the neighboring vasculo-nervous structures that justify excision. Preoperative examinations and planning must be done. It is useful to distinguish between benign and malignant tumors. According to Gitelis et al. the study of radiography, computed tomography and magnetic resonance imaging should be performed to establish a diagnosis and a therapeutic strategy and to evaluate the risk of malignant transformation of this tumor (13). Preoperative radiographs, computed tomography and MRI were performed in our patient to evaluate the extent of osteochondroma mass and cartilaginous capsule. Thus, with extensive research in the literature, we conclude that this is a rare entity and that it has been diagnosed due to compression symptoms. There were no symptoms of compression on the vessels or the urinary tract. A similar case was reported by Qaisrani GH and Al. (14) who was also present on the upper limb and was removed for aesthetic deformation. In our case, the complete suppression of the mass has been achieved.

CONCLUSION

Benign osteochondromas are usually fortuitously disgnosed and are usually treated for aesthetic purposes with a very low incidence of recurrence if they are removed after skeletal maturity. They may also have compressive symptoms causing pain or functional impotence. In addition, pelvic osteochondromas are a rare entity but the risk of transformation into chondrosarcoma must be kept in mind.

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