Sacral Osteoblastoma

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Sacral Osteoblastoma

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Abstract

We report the case of Sacral osteoblastoma. The osteoblastoma is a benign tumor but can be aggressive, its the sacral location is unusual, the differential diagnosis is osteoid osteoma especially. CT contributes largely to the diagnosis, but MRI is the examination of choice in identifying the bone lesion, from his seat and its impact on neural structures.

Introduction

The osteoblastoma is a rare tumor, it represents only 1% of primary tumors of bone and 3% of benign bone tumors. (1) The localization represents 40% of spinal bone lesions, lumbar spine is most frequently affected. (2) MRI is the examination of choice in the identification of the bone defect with its repercussion on neural structures. (3)

Case Report

We report the case of a man of 31 years, manual worker. Having as antecedent, lumbago for over a year without irradiation and without any particular signs associated. He presented for 4 months a right S1 type sciatica. The standard radiographs showed a lytic lesion of the sacrum interesting right wing, with multiple peripheral and central calcification. CT of the sacrum showed a lesion process centered on the first sacral foramen on the right, with interruption of the cortex which is blown in places, and a central bone matrix. MRI shows the lesion of the first sacral foramen right hypointense T1 and hyperintense on T2 with discrete peripheral hypointense hull. CT guided biopsy can reveal a sacral osteoblastoma. The patient underwent resection of osteoblastoma. Evolution is a marked clinical improvement.

Discussion

It is a benign tumor, nearest to osteoid osteoma, often called "osteoid osteoma giant", it is distinguished by its larger size (> 1.5 cm) and its rarity (6 times less frequent). (1, 4, 5)

It occurs in the first two decades of life, 80% of patients between 5 and 25 years with a male predominance (sex ratio 3/1). (6)

It is never asymptomatic, but clinical signs are usually less important than osteoid osteoma. (7)

Moderate pain dating several months, it is axial or radicular, usually nocturnal and less responsive to salicylic acid as osteoma osteoid. (7, 8)

She is seated in 40% of the spine, most often on the posterior arch, are achieved by decreasing order: lumbar spine, thoracic, cervical and sacrum. the sacral location is seen in 10% of cases. (9)

The standard radiographs showed an expansive osteolytic lesion though limited, blowing the cortex, limited by a shell corresponding to a subperiostal osteogenesis. The matrix is made of fabric with areas of ossification and / or calcifications. (2, 5, 10)

CT accurately and characterized the tumor matrix, the limits of the lesion, periosteal reaction and studied the extension to soft tissues. it allows to explore areas not easily accessible to standard radiographs as is the case of the sacrum, and to assess tumor aggressiveness on radiological limits of perilesional osteosclerosis. Also allows scanno guided biopsies. (2, 5, 7)

The MRI found a homogeneous lobulated expansive lesion isointense or hypointense on T1-weighted sequence, and hyper or isointense on T2-weighted images, limited by a shell low signal on T1 and T2. (5, 6, 7)

Lesional and perilesional enhancement after gadolinium injection overestimates the extent of the lesion. It clarifies the relationship between the tumor and root structures. Arteriography has a few indications in the preoperative evaluation of osteoblastoma, it also allows embolization in case of intense vascularization. (10)

The aggressive osteoblastoma is distinguished by an unusual periosteal reaction with massive invasion of soft tissues, and anatomical pathology by intense cellularity, cellular atypia and mitoses rapid. The differential diagnosis is essentially with the aneurysmal cyst, osteoidosteoma, Brodie abscess. Treatment consists of en bloc resection. The evolution is always benign, with complete cure after resection. (7, 8)

Conclusion

The osteoblastoma is a benign tumor but can be aggressive, its the sacral location is unusual, the
differential diagnosis is osteoid osteoma especially. CT contributes largely to the diagnosis, but MRI is the examination of choice in identifying the bone lesion, from his seat and its impact on neural structures.

References


Abbreviation

MRI: Magnetic resonance imaging
CT: computed tomography scan
Illustrations

Illustration 1

Fig1: The standard radiographs showed a lytic lesion of the sacrum interesting right wing, with multiple peripheral and central calcification.

Illustration 2

Fig2: CT of the sacrum showed a lesion process centered on the first sacral foramen on the right, with interruption of the cortex which is blown in places, and a central bone matrix.
Illustration 3

Fig3: CT guided biopsy can reveal a sacral osteoblastoma.

Illustration 4

Fig4: MRI shows the lesion of the first sacral foramen right hypointense T1 and hyperintense on T2 with discrete peripheral hypointense hull.
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