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Osteoblastoma ankle about a case and review of literature

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ABSTRACT

Osteoblastoma is a rare benign bone tumor, occurring during the second and third decade with a male predominance of spinal preferential seat secondarily the long bones of the limbs, rarely ends Its diagnosis is based on a set of arguments; clinical dominated by doctors located, the imaging objective lyric picture surrounded by sclerotic bone reaction and can invade soft tissues, and especially the pathological examination confirmed the diagnosis highlighting a significant proliferation of osteoblastic cells with the presence of osteoid tissue bathed in a lush and richly vascularised connective tissue. Treatment is exclusively surgical resection is complete and guarantee the prevention of recurrence. We report the case of an osteoblastoma of the ankle in a young adult revealed by localized pain and functional impairment. Standard radiography made was considered completely normal and the persistence of complaints CT was performed but was misleading suggestive of osteochondrosis. This is a pathological examination performed on specimens which helped rectify the diagnosis. The suites in this patient were simple, very satisfactory functional outcome osteoblastoma tumor is easily diagnosed if you think, easy treatment if done right.

Introduction

Osteoblastoma: individualized entity by Jaffe El Lichtenstein as benign osteoblastic bone tumor origin characterized by the proliferation of many osteoblasts and the presence of a significant amount of osteoid tissue within a richly vascularised connective tissue stroma.

This is a rare benign bone tumor, representing less than 1 % of primary bone tumors and 3% of benign tumors often occur during the second and third decade with a male predominance.

His preferred seat is 40% above the spine at the posterior arch, followed by long bones such as the femur and tibia from 20 to 30 % and finally the small bones of the hands and feet with a frequency of 15 %.

Its diagnosis is based on radiological, pathological and especially scalable set of clinical and appropriate surgical treatment based on the removal is necessary to prevent any aggressive course and a possible but very rare malignant transformation.

The location of the tumor at the ankle is exceptional; making the value of this work was made from a found in the service case. Through this study we will see the data of the literature regarding the osteoblastoma in general and the results obtained in a patient with osteoblastoma ankle.

Observation

This is a male patient, aged 32, with no particular history, with 3 Months pin locates the anterior region of the left ankle, intense, permanent, is emphasizing the mobilization and walk resistant to non steroidal anti -inflammatory and night without exacerbation, operating in a context afebrile with conservation condition. Objective clinical examination exquisite pain on palpation and mobilization of the ankle with a limitation of flexion and extension with pain. In addition there or swelling or signs of local inflammation.

A radiograph was performed and was found absolutely normal (Fig1). Given the persistence of complaints, CT was done and showed a small gap in the anterior tibial Pilon evoking the diagnosis of osteochondrosis (Fig2). Complete excision of the lesion was performed and histology confirmed the diagnosis of osteoblastoma.

The clinical pathology fragment release, measuring 1.5 * 0.7cm * 0.5cm was examined in several cutaways. It shows a benign tumor formation primitive nature, characterized by a weft made of mesenchymal osteoblast cells of variable size, but not in dystrophic atypical nuclei with exceptional mitotic figures. The bookstore is fibrous in nature. There is an important bone development made span uniforme dirregular contours and bordered by a sighting of osteoblastic cells with very few osteoblasts. The whole is sometimes separated by hemorrhagic suffusion. The change is good for one year, with pain relief and preservation of normal mobility (Fig3).

Discussion

Osteoblastoma is a rare bone tumor, representing 1% of primary tumors and 3% of benign tumors. It is a male predominance with female sex ratio of 2/1. All authors have highlighted a peak incidence between 10-30 years with a mean age of 23, in fact the case met the service is male with an age of 32 years, which largely coincides with the literature.

Osteoblastoma has a clear preference for the 40 % of the spine then maps the long bones with a frequency of 20 %. Achieving the ankle is very rare, indeed all bones of the foot and ankle represents 6-15 % of the locations (1,2). This is consistent with the results obtained by the following authors: Thomas et al (1) talk about 12.5% of locations in the foot and ankle in a series of 329 osteoblastomas.

Herman (3) 16 % of the reported locations of total 98 cases, whereas Lucas (2) et al relate to locations on 9 % of 306 cases. Thus, the case report is unique by its location at the ankle which is rare. Clinically, as with osteoblastoma of other sites, pain is the main symptom of varying intensity, exaggerated mobilization and walking, intermittent at first then continues with paroxysmal nocturnal and usually calmed by taking acid salicylic which directs substantially diagnosis. Local swelling and limitation of motion can be observed, but they are less frequent symptoms reported by our patient but the usual medical

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treatment is ineffective. Radiologically, in typical forms the diagnosis of osteoblastoma of the ankle is usually based solely on the radiograph, which was absolutely not the case in our patient.

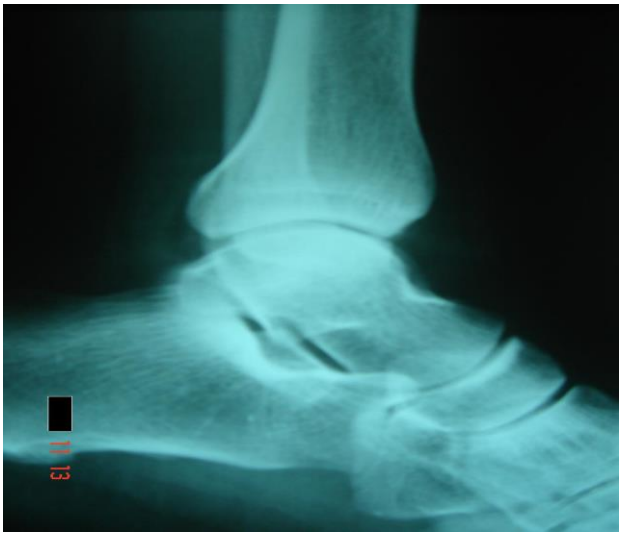

Fig 1: Standard radiograph of the left ankle (preoperative): Normal.

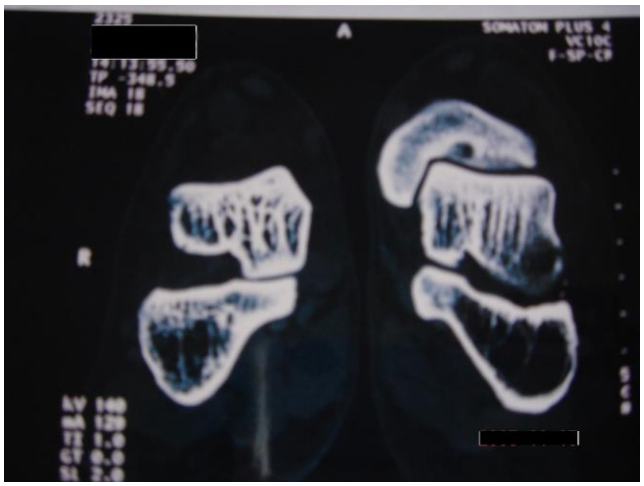

Fig 2: scan of the left ankle showing the presence of a previous incomplete picture on the left tibial bank

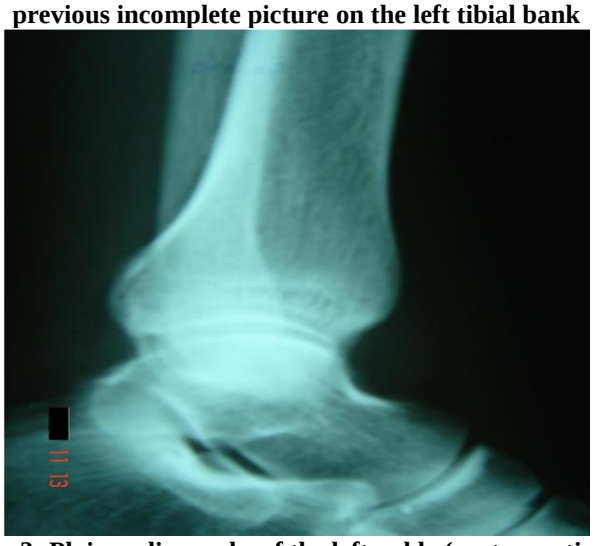

Fig 3: Plain radiographs of the left ankle (postoperative)

In the ankle, the location is often subperiostal, when the lesion is located deeper in the spinal level perilesional sclerosis is minimal.

The tumor typically appears as a small lyric area within a condensing cortical reaction of variable intensity, its contours are not always clear, sometimes marked by a sclerotic reaction. While the standard clichés of our observation were all normal (3,4). CT provides a detailed analysis of bone lesions and extra bone tumor expansion and remains the basic examination in the diagnosis of osteoblastoma, but in our patient the images provided by CT were misleading suggesting another diagnosis Osteochondritis (5,6).

To differentiate osteoblastoma of osteoid osteoma, the diameter is a factor discriminator, osteoid osteoma is generally less than 1 cm, the other characteristics are also important radiography no such reaction sclerosis marked, and an elongate periosteum ginned the presence of an extension to the soft tissues, especially in osteoblastoma subperiostal (7,8).

Osteoblastoma aggressive can cause extensive bone destruction of the matrix, as well as soft tissue and periostal reaction, making it difficult to distinguish from osteosarcoma. Descriptive point of view, osteoblastoma is a well-circumscribed lesion, intraosseous, usually united focal unilober whose size is greater than 2cm. However, smaller tumors may be.

From the pathological point of view, presents osteoblastoma microscopically as a reddish compact, hemorrhagic and friable granulation tissue, it is microscopically highly vascular tissue is immature tissue osteoid and bone, at the cellular level with many osteoblasts few giant cells and osteoclasts, all bathed in abundant connective tissue (9).

It is important to note that this histological appearance is similar to osteoid osteoma and the boundary between the two is difficult to fix the beam arguments: size, location, radiological and histological study allows making the diagnosis. Definitive diagnosis is based on curettage - excision of the tumor with histological examination of the surgical specimen objectifying the presence of osteoblastic tumor.

Results in the literature after surgery are good, however, the recurrence rate is about 10% of cases of malignant transformation have been reported (10,11,12). In our patient evolves with a decline of one year was marked by the disappearance of pain, preservation of normal mobility and range of flexion-extension very satisfactory. And our observation is characterized radiography standard normal CT misleading. Only one-part review has to make the diagnosis.

Conclusion

At the end of this study, a localized bone pain, night exaggeration, relieved by salicylates, without systemic symptoms in children adolescents and young adults must think osteoblastoma and should be a standard radiography, scintigraphy or better a CT scan. Once the diagnosis is made, a radical surgical treatment is necessary for pain relief and prevention of complications. Treatment is usually easy in the peripheral locations and gives good results; untreated or poorly treated evolution can be towards recidivism, aggression or malignant transformation.

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