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CLINICAL CASE

Epithelioid osteoblastoma or aggressive osteoblastoma of the astragalus. Presentation of a case and revision of clinical and pathological symptoms

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KEYWORDS
Osteoblastoma;
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Abstract This is the case of a 58 year-old man with a painful tumour in his right ankle, resulting from a long development. An osteolytic injury was found in an X-ray, formed by bone or osteoid trabeculae surrounded by epithelioid osteoblasts and amongst these cells there were osteoclast-type multinucleated cells. The histogenesis of the tumour, the differential diagnosis and the treatment modalities are reported.

PALABRAS CLAVE
Osteoblastoma;
Osteoblastoma agresivo;
Osteoblastoma epitelioides

Osteoblastoma epitelioide u osteoblastoma agresivo del astrágalo. Presentación de un caso y revisión del cuadro clínico patológico

Resumen Se presenta el caso de un hombre de 58 años de edad con un tumor doloroso en el tobillo derecho, de larga evolución. Radiológicamente se encontró una lesión osteolítica, con un anillo de esclerosis en el astrágalo. Histológicamente el tumor, está formado por trabéculas de hueso u osteoide rodeadas de osteoblastos epitelioides y entre estas células hay células multinucleadas tipo osteoclasto. Se comenta la histogénesis del tumor, el diagnóstico diferencial y las modalidades de tratamiento.

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Introduction

The two clinically important varieties of osteoblastoma are: conventional osteoblastoma and epithelioid or aggressive osteoblastoma.

Conventional (CO) or ordinary osteoblastomas are low-frequency bone-forming tumours that are routinely larger than 2 cm. They are formed by osteoblasts that deposit bone trabeculae.

In the Mayo Clinic series, they form 1% of bone tumours and 3.5% of benign primary bone tumours. They occur in 72% of cases in men.[1,2]

CO has been localised in most bones of the body but predominates in the spine 32%, femur 12%, tibia 10% and bones in the foot and ankle 9% (2). In the cases in the foot, 4.6% present in the tarsal bones.[1]

Patients' ages range from 6 months to 75 years, with an average of 20 years, but 75% of patients are younger than 25 years.[2] Clinically, it is characterised by pain accompanied or not by an increase in volume. The first symptom is due to the presence of axons in the tumour and the release of prostaglandins by the tumours.[3,4]

Radiological studies show a lesion that expands to the bone, well-defined and surrounded by a bone crust. Mineralisation is variable but generally has a lithic appearance, surrounded by a ring of sclerosis; there may be oedema and inflammation of the soft tissues. The morphological findings are best demonstrated with CT scans and MRIs.[2,5]

Macroscopically, the fragments of curettage are haemorrhagic, of friable consistency and with a sandy surface. When the CO is removed in block, it is seen to be very well demarcated, sometimes with cysts full of blood.

Histologically, the osteoid and bone trabeculae have a regular appearance; they are surrounded by uniform osteoblasts. The intertravecular space is occupied by vascular tissue with osteoblasts and fusiform cells. There is no permeation to preexisting lamellar bone.[2]

The histological varieties of CO include those with cystic changes, others with cartilaginous matrix, those with large and bizarre stromal cells with a degenerate appearance (these tumours have also been called pseudo-malignant osteoblastomas) and finally the group showing small areas of epithelioid-type osteoblastic cells. From these it is necessary to separate CO, since in the latter epithelioid areas are predominant and also have a different clinical behaviour.[1,6]

The treatment of CO is curettage and occasionally block resection; with curettage the recurrence is 10%–20%. Malignant transformation is rare.[7]

Radiation therapy or chemotherapy is not indicated in CO, even when the tumour appears to respond to chemotherapy.[8]

The purpose of this publication is to present the first case of epithelioid osteoblastoma or aggressive osteoblastoma recorded in the archives of the Pathology Department of the ''Dr. Eduardo Liceaga'' Hospital General de México. This tumour is less common than CO and so it is important to recognise it in order to make a correct diagnosis and avoid overtreatment by confusing it with osteosarcoma and performing mutilating surgery.

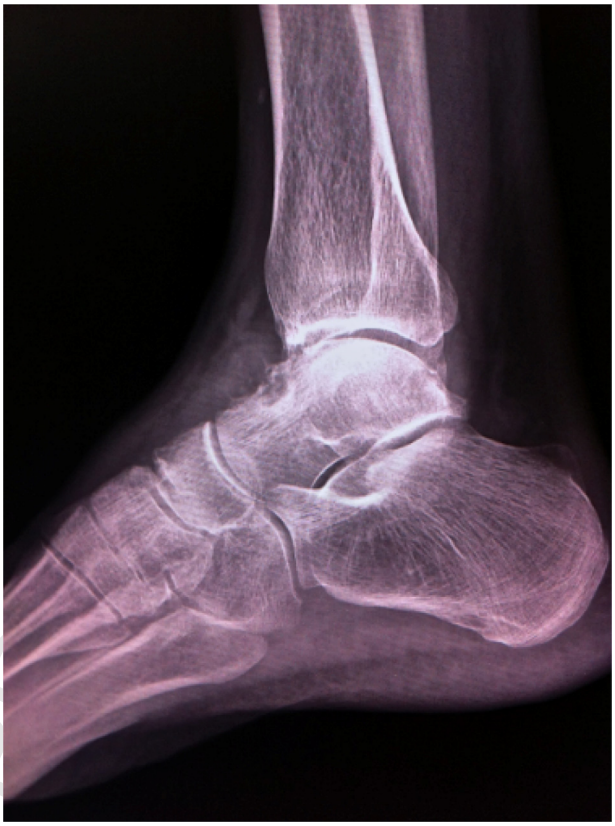

Figure 1 Lateral X-ray of the tibio-astragalin joint, with an osteolytic lesion in the talus, well limited and surrounded by an area of sclerosis.

Case report

A 58-year-old man with no relevant history for his current condition. The current condition began 6 years before his hospital admission, with sharp pain in the right ankle, with an intensity of 3/10 on the VAS scale, pain subsided with non-steroidal painkillers; it was later associated with an increase in volume of the anteromedial side of the ankle. The pain increased in intensity up to 8/10, with flexoextension limitation of the ankle; it was under these conditions that he was admitted to hospital.

During the physical examination, the right ankle showed dorsal bending of 50° and plantar bending of 30°. The movements caused joint pain and a soft tumour was found on the anteromedial side of the ankle at the level of the tibioplasty joint, adhered to deep planes, painful to the touch and 3×3 cm. The rest of the physical examination was within normal limits.

The anteroposterior and lateral radiographic study showed an osteolytic lesion at the level of the talus, of an ovoid shape and surrounded by a ring of sclerosis (Fig. 1).

Laboratory studies were within normal limits. Treatment was performed by bone curettage in the neck of the talus, without postoperative complications.

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