Rev esp cir ortop traumatol. 2010;**54(6)**:411-412

Revista Española de Cirugía Ortopédica y Traumatología

www.elsevier.es/rot

LETTER TO THE EDITOR

Pre-patellar glomus tumour

Tumor glómico prerrotuliano

Sir,

Glomus tumours are rare neoplasias, approximately 1.6%of tumours in the soft tissues of limbs.[1] They are generally benign and their removal is described as curative. When found in atypical locations, they can be difficult lesions to diagnose.[2] Published reports of glomus tumours in the knee are scant. The case we present is a prepatellar glomus tumour that we consider to be of interest because of its rarity.

Case report

Male, 27 years old, attending the clinic due to left gonalgia of non-specific characteristics which, over time, turned into a small growth at the prepatellar level. No alterations were observed at the cutaneous level. Magnetic nuclear resonance (NMR) study revealed a prepatellar bursa with a growth of 2×1 cm with characteristics of hypointensity in T1 and a high signal in T2, classified as a non-sebaceous cyst. Complete exeresis of the mass was performed and the pathological study described it as a well-defined nodule of greyish-blue colouring, measuring 1.2×0.7 cm, with characteristics of a glomus tumour surrounded by adipose tissue.

Clinical signs remitted immediately, but seven years later the patient returned to the clinic due to a relapse in the symptoms. specifically paroxysmal pain on rubbing and pressure of a small growth under the scar effected previously. The NMR revealed a bilobulated prepatellar nodular lesion measuring 1.5×1 cm, located laterally to the previous surgery area; it showed cystic characteristics with intense uptake of contrast and, therefore, signs of hypervascular lesion (fig. 1). The suspected diagnosis was a glomus tumour.

During surgery, exeresis was performed on the lesion, measuring 1.5×0.8×0.6 cm, with an elastic consistency and histological characteristics that confirmed the relapsed glomus tumour. The pathology study showed a well-defined growth with multiple vascular lumina, separated by stroma, with numerous rounded-nuclei glomus cells, without pleomorphism or mitosis (fig. 2); the histochemical study showed immunopositivity in tumour cells to vimentin, and negative results to cytokeratins and endothelial markers.

Clinical signs were relieved after surgery and the patient continues to be asymptomatic eighteen months later.

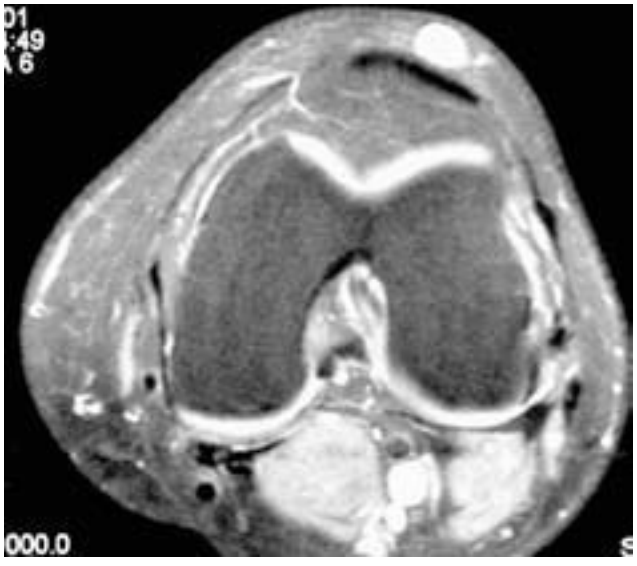

Figure 1 NMR image.

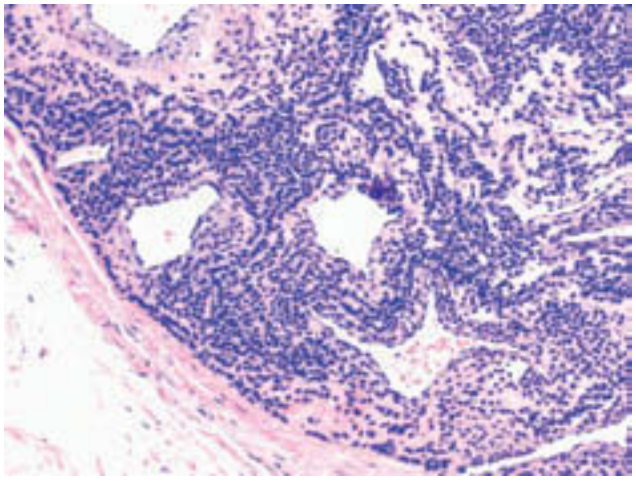

Figure 2 Histological image (H&E 100×).

Discussion

Glomus tumours may appear alone or in small numbers, with single tumours being more frequent and characteristic, with a greater frequency in the third and fourth decade of life.[3,4] Glomus tumours generally appear in areas rich in glomus bodies, i.e. the subungueal region and the deep dermis of the body's limbs,[3] but they have also been described in other areas, such as muscles, bones and joints[2,4] and even in locations where there are no glomus bodies such as the mediastinum and the stomach[3] and glomus tumours may develop from perivascular cells differentiating from glomus cells.[3]

In the typical subungueal locations and distal limb areas. they appear as subcutaneous nodules that change the skin colouring to bluish-purple[3] and pain is usually the first symptom and its absence is certainly exceptional. In extradigital locations the most common symptom is pain, followed by local sensitivity.[5] The classic triad of symptoms are lancing paroxysmal pain, increased sensitivity on palpation and thermal hyperalgesia, especially to cold; although, in many cases, the three symptoms do not always appear together.[5]

In atypical locations in which the growth is not superficial, such as that described in our case, and in view of their small size, they can certainly be difficult to diagnose,[2] thus making the symptoms long-lived and leading to a clear delay in the diagnosis.[4,5]

No specific complementary examinations are available to confirm the suspected clinical diagnosis and there are false negatives with NMR, attributed to the small size of the lesion.[5] The pathology most frequently confused with a glomus tumour in the limbs is a post-traumatic neuroma caused by an unremembered accident.

The recommended treatment is meticulously complete excision to reveal a rounded or oval tumour, well defined and encapsulated, measuring less than one centimetre and purple or bluish in colour.

Recurrence of the symptoms should suggest incomplete excision rather than a relapse. A figure of 10% risk of local relapse due to incomplete excision has been discussed.[3] The percentage of malignant glomus tumours is small, less than 1%, occurring in those of larger size (more than 2 centimetres), deep location and a high mitotic index with atypical mitotic figures. In these cases, the risk of metastasis is greater than 25%[3]

According to Schiefer et al.,[5] in cases of chronic pain in a specific location, consideration must be given to the possibility of a glomus tumour, evaluating the classic triad, requesting an NMR study in cases of doubt, and scheduling complete excision. In any case, high levels of suspicion must not be sought, so as not to delay diagnosis and treatment. When the glomus tumours are in atypical locations, delay is frequent because extradigital locations are infrequent[5] and they are not thought of even though as many as 61%of the glomus tumours reviewed are extradigital.[5]

In the tumour described here, the diagnosis was not reached in the first episode until the pathology report was received on the excised specimen, after a long time with a clinical condition but without presenting the characteristic triad.

References

1. Clark ML, O'Hara C, Dobson PJ, Smith AL. Glomus tumor and knee pain: a report of four cases. Knee. 2009;16:231-4.
2. Amillo S, Arriola FJ, Muñoz G. Extradigital glomus tumour causing thigh pain. A case report. J Bone Joint Surg Br. 1997;79-B:104-6.
3. Gombos Z, Zhang PJ. Glomus tumor. Arch Pathol Lab Med. 2008;132:1448-52.
4. Puchala M, Kruczynski J, Szukalski J, Lianeri M. Glomangioma as a rare cause of knee pain. A report of two cases. J Bone Joint Surg Am. 2008;90-A:2505-8.
5. Schiefer TK, Parker WL, Anakwenze OA, Amadio PC, Inwards CY, Spinner RJ. Extradigital glomus tumors: A 20-year experience. Mayo Clin Proc. 2006;81:1337-44.

M.J. Sangüesa*, R. Fernández-Gabarda and F. Cabanes Soriano

Orthopaedic and Traumatology Surgery Department, "Arnau de Vilanova" Hospital, Valencia, Spain

*Corresponding author.
E-mail: mjosan@comv.es (M.J. Sangüesa).