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Atypical Localisation of a Glomus Tumor of the Knee

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Abstract: *Glomus tumors are benign neoplasms that originate from neuromyoarterial glomus bodies, Most glomus tumors present in the subungual area of digits. Extradigital glomus tumors are a very rare entity. There is a lack of sufficient documentation concerning extradigital glomus tumors which results in their late diagnosis and treatment. We report the case of a knee glomus tumor, its subsequent diagnosis and surgical treatment.*

Keywords : *Glomus tumor, knee, MRI.*

Introduction

Glomus tumors are rare and benign. They result from hyperplasia of the glomus apparatus characterised by the presence of an arteriovenous anastomosis (1). These tumors were initially described in 1812 by Wood under the name painful subcutaneous tubercle (2) then in 1924, Masson linked them to a glomus origin (3). These tumors most often occur in the fingers and represent 1 to 5% of hand tumors (4). Extraungual presentation is rare and little known, causing a diagnostic delay. We report the case of a 75-year-old man who presented with a glomus tumor in the left knee. The goal of our work is to draw attention to other locations of this tumor so as not to delay the diagnosis and management of these tumors.

Observation

This is a 75-year-old patient with a history of prostate cancer for which he had undergone prostatectomy followed by chemotherapy. The patient consulted us following pain like electric shocks on the lateral side of the left knee which had been present for 2 years. At first these pains were intermittent, triggered by touch, then these pains became permanent, hindering walking. The examination revealed a small painful mass on palpation in the lateral region of the left knee. The patient first underwent an X-ray of the affected knee without abnormality, then an ultrasound showing a well-limited and hypervascularised subcutaneous tissue formation on the external aspect of the left knee. The patient subsequently underwent a CT angiogram of the left knee revealing a subcutaneous tissue lesion on the lateral aspect of the knee. Given the small size and benign nature of the tumor, an excisional biopsy of the tumor was performed and the surgical specimen was sent to the laboratory for anatomopathological examination. The pathological examination revealed a glomus tumor. The postoperative course was simple and the patient's pain immediately disappeared; the clinical examination after 6 months found the patient to be asymptomatic.

Discussion

Glomus tumors arise from an overgrowth of tissue in the glomus apparatus. This anatomical entity is rich in specialized arteriovenous anastomosis, responsible for thermoregulation. (5) These tumors are rare and benign and represent approximately 1 to 5% of all soft tissue tumors (6). They are mainly observed in adults aged between 30 and 50 years and it preferentially affects women, in around 75% of cases (7-9). The preferred localisation is in the hand, (10) atypical localisations often go unnoticed, which can delay diagnosis and treatment (11,12). The symptoms present in the form of a clinical triad: paroxysmal pain, sensitivity to cold and a tumorous nodule (7); this notion of pain often exacerbated by a change in temperature is found by Theumann et al. in 2005 (13). Additional examinations can help with diagnosis; ultrasound, which is an operator-dependent examination and has low specificity, can help localise the lesion (14). MRI is the examination of choice to diagnose a glomus tumor. The tumor is described as a slightly hypointense lesion on T1, which takes up the contrast product after gadolinium injection and is hyperintense on T2. (15,16). The treatment is surgical and consists of a wide excision removing the tumor in one piece (7), which relieves the symptoms. The risk of reocurrence varies between 1 and 18% and is linked to incomplete excision (17). The definitive diagnosis is confirmed by a pathological analysis of the tumour, especially when the localisation of the tumor is unusual.

Conclusion

The glomus tumor is a rare but not exceptional benign skin tumor, its site of predilection is the fingers but it can be located in any region containing glomi tissues. Any painful skin mass should raise suspicion for a glomus tumor. An MRI is essential in the

diagnosis and early management of these tumors, especially when they are extradigital. Its treatment is exclusively surgical and the subsequent anatomopathological examination of the mass confirms the diagnosis.

Figure 1 : Glomus tumor after excision

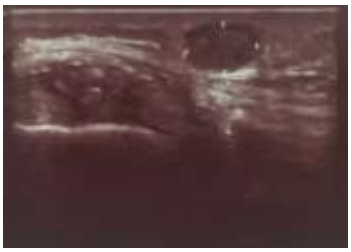

Figure 2 : Ultrasound image showing a hypoechogenic and hypervascularised tissular formation.

Figure 3 : CT Angiography showing a subcutaneous lesion in the lateral region of the knee that is isodense and enhanced after injection of contrast.

Conflict of Interest

None

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