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Multiple Glomus Tumors of the Leg: A Case Report (Unusual Localization)

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Abstract **Case Report**

Glomus tumors are rare benign tumors. The most frequent locations are in the hand and fingers. Extradigital locations are reported in the form of clinical cases. Diagnostic orientation in the face of the clinical triad of pain, area of skin retraction, cold hypersensitivity, and the appearance on MRI (magnetic resonance imaging) should lead to surgical excision and histological confirmation. Surgical treatment by excision alone leads to the disappearance of clinical symptoms and thus prevents progression to chronicity.

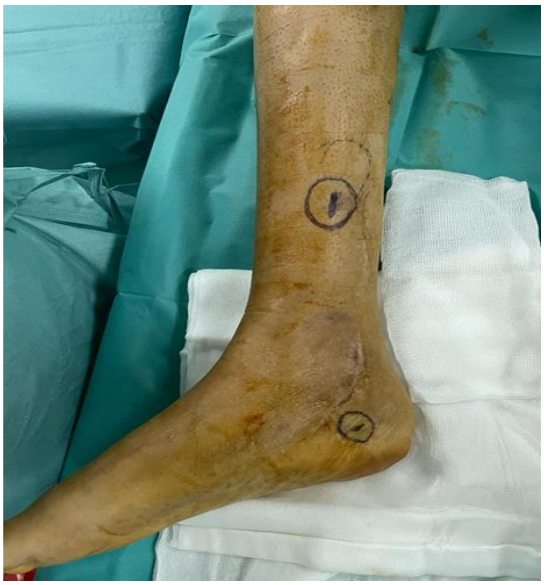
Keywords: Glomus tumor, Glomus cell tumor, Benign tumor, Soft tissue tumor, Vascular tumor.

INTRODUCTION

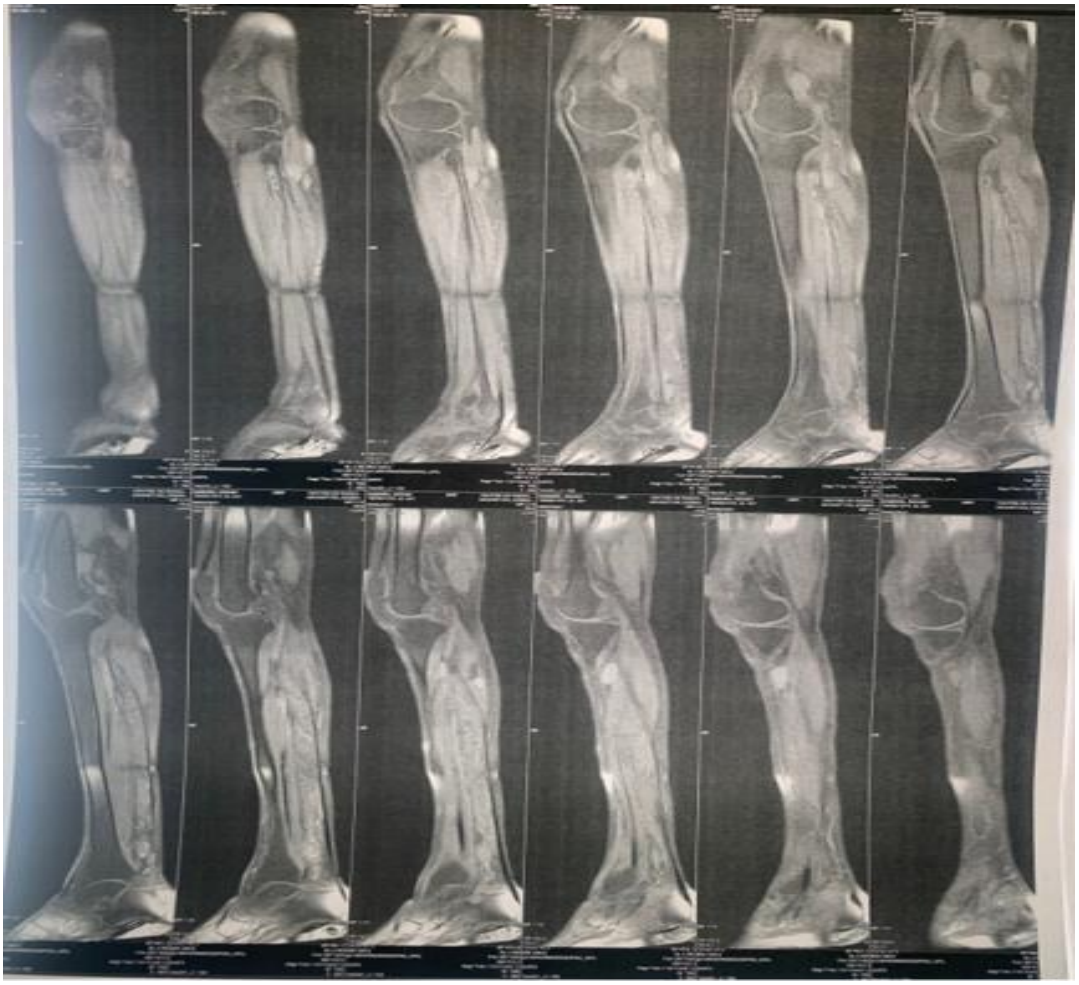
The glomus tumor is a rare, benign tumor that develops from the glomus body found mainly at the extremities. Clinically, the glomus tumor causes major functional discomfort with excruciating pain. We report an exceptional case of a glomus tumor located in the leg.

OBSERVATION

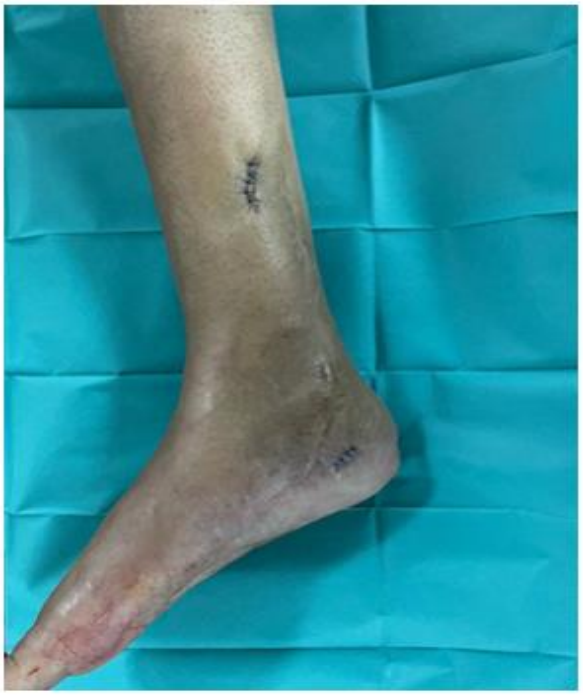
This is a 46-year-old patient with no specific medical history, particularly no history of trauma, who presented with intermittent pain in the right leg for the past 6 months, mostly triggered by palpation. Examination revealed several painful soft masses in the leg and ankle area.



An MRI was performed on the patient, revealing nodular formations in the soft tissues of the right lower limb, both above and below the fascia, extending from the lower third of the thigh to the foot. The largest nodules measured 21x26mm (interosseous membrane) and 48x21mm (popliteal fossa).



Surgical resection of the masses and histopathological analysis favored the diagnosis of glomus tumors. The course was marked by recurrence and the appearance of new lesions of the same structure.



DISCUSSION

Glomus tumors are hamartomas that develop from a neuro-myovascular structure located at the dermo-hypodermal junction: the glomus. This structure is responsible for regulating cutaneous microcirculation and is an important factor in thermal regulation [1, 2].

First reported by Wood in 1812 as a "painful subcutaneous nodule," Masson in 1924 provided a definitive description of glomus by describing vascular spaces lined with endothelium surrounded by masses of round epithelioid cells, which tend to become slender [3].

These tumors most commonly occur in the fingers (65%), with extra-digital involvement being less common (11%) according to Carroll [4].

The clinical triad of paroxysmal pain, exaggerated sensitivity to cold, and the presence of a solitary nodule are typical signs. The usually small size of the tumor can make diagnosis difficult and delayed. In our case, pain was the only presenting symptom that led the patient to seek medical attention [5].

The key diagnostic imaging modality is MRI, particularly in high resolution, allowing differentiation between the tumor and healthy tissue. Treatment for the disease is surgical in solitary forms: complete excision including the capsule in joint areas to prevent recurrence. However, in multiple uni or multifocal forms, as in our patient's case, treatment varies from monitoring asymptomatic locations to surgical excision of symptomatic sites [8, 9].

CONCLUSION

In conclusion, glomus tumors are rare but important lesions to recognize due to their potential to cause intense pain and their tendency to recur. They develop from the glomus, a neuro-myovascular structure involved in regulating cutaneous microcirculation and thermoregulation. Diagnosis is based on the characteristic clinical triad and is confirmed by imaging exams such as MRI. The main treatment is surgical, with complete excision recommended for solitary lesions to prevent recurrence. For multiple cases, an individualized approach ranging from monitoring to surgical excision is considered based on symptomatology.

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