Case for diagnosis *

Caso para diagnóstico

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CASE REPORT

White male patient, 44 years-old, reported the appearance 7 years ago of lesions in the plantar region, slow-growing, painful to the touch and which gradually caused difficulty in walking. Examination revealed erythematous-violaceous nodule with a smooth surface, 1cm in diameter, in the left plantar region, painful on palpation (Figure 1). Patient (smoker and drinker) denied familial cases.

Ultrasound performed on left foot revealed a hypoechoic image containing a small, anechoic, irregular, circumscribed, area subcutaneously in the plantar region. No change in vascularization was revealed by color Doppler ultrasound.

Surgical excision of the lesion was performed and subsequent histopathological examination revealed proliferation of blood vessels in the dermis surrounded by round cells with uniform nuclei in the stroma in a fibrous capsule (Figures 2). Performed actin which showed diffuse and intense smooth muscle expression (Figure 3).

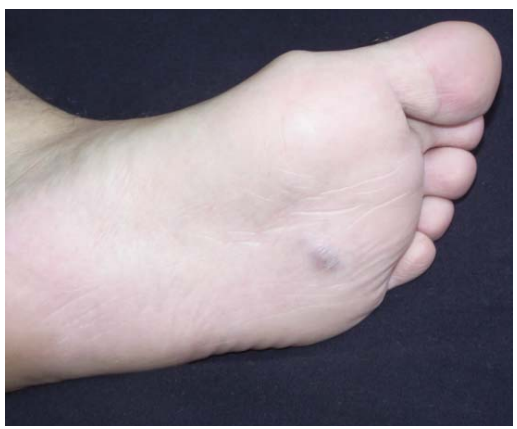

FIGURE 1: Clinical aspect of the plantar nodule

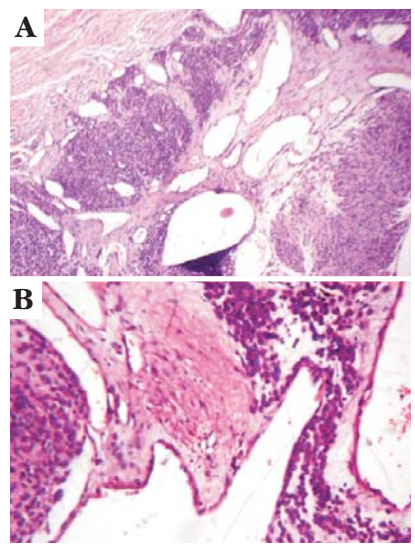

FIGURE 2: A. Dense cell structure of the well-circumscribed nodule residing in the dermis (HE 40x). **B.** Small uniform cells forming solid blocks or bands surrounding vascular channels (HE 100x)

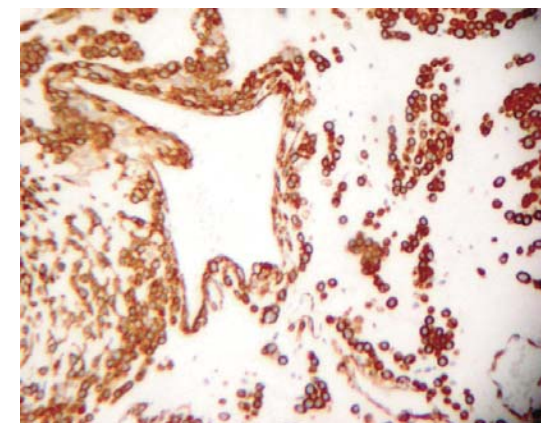

FIGURE 3: Cells with high expression for actin of smooth muscle surrounding the vascular wall (Actin, 100x)

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DISCUSSÃO

The glomus tumor was first described by William Wood in 1812. It is an uncommon benign neoplastic lesion derived from modified smooth muscle cells (glomus). These cells line the Sucquet-Roye canal, the cutaneous *glomus* apparatus, which serves to regulate blood circulation and body temperature. The glomus tumor is characterized by paroxysmal pain, which may or may not be triggered by trauma or temperature variations. [2]

Two forms of this tumor exist: solitary and multiple. The solitary glomus tumor occurs mainly in adults in the subungual region, presenting as a violet erythematous macule or nodule, normally less than 2cm in diameter, painful on palpation or sensitive to thermal changes. The tumors can be found in deeper areas of the body such as in tendons, ligaments, skeletal muscles, joints, nerves and bones. [3] Location in the feet, as in the present case, has been reported in approximately 3% of cases. [4]

Variable in number, multiple glomus tumors affect younger individuals, presenting in two distribution patterns: (i) as segmental lesions on a limb, sparing the face and trunk; and (ii) as disseminated lesions throughout the integument. Parsons et al [3] observed a positive family history in 60% of cases of multiple glomus tumors, transmitted by autosomal dominant inheritance with incomplete penetrance, with the responsible gene located on chromosome 1p21-22. [3,5,6]. Ectopic glomus tumors have been reported in the lungs, kidneys, bones, trachea and stomach. [7]

Clinical diagnosis is done by the classical triad of spontaneous pain, sensitivity to pressure and temperature changes. [8] In a retrospective study of extradigital glomus tumors, Schiefer et al found localized pain and tenderness in 86% of the patients, but intolerance to temperature changes occurred in only 2% of the same group. Pain resulting from thermal changes was not found in the case reported here, due perhaps to less exposure of the feet to cold and significant sensitivity to pressure of the plantar location. Radiography may reveal bone lysis in the affected phalanx. Ultrasound shows glomus tumors as well-circumscribed hypoechoic masses and Doppler findings are inconsistent, as in this report. MRI elucidates doubtful cases, but its use is limited on account of high cost. [8,9] Histopathology reveals three components: glomus cells, vasculature and smooth muscle cells, subdivided into solid tumors (predominantly smooth muscle cells), glomangioma (predominance of the vascular component) and glomangiomyoma (mixed). [3,10] The overall picture is of circumscribed lesions in the dermis consisting of vascular spaces arranged in a delicate fibrous stroma, with glomus cells surrounding the vascular proliferation. [2] The glomus cells express immunoreactivity for actin and vimentin. [10]

Neuroma, neurofibroma, mucous cyst, fibroma, osteochondroma, amelanotic melanoma and subungual melanoblastoma are differential diagnoses.

Treatment consists of surgical excision of the tumor, with or without cauterization of the tumor bed with bipolar electrocautery. The persistence of symptoms in the first three months is suggestive of partial removal of the tumor, while the return of symptoms after one year indicates tumor recurrence.[2,8] ❑

Abstract: Glomus tumor is a painful tumor derived from the glomus terminal which regulates blood circulation and body temperature Despite its rarity, particular attention needs to be paid to symptoms associated with this tumor: paroxysmal pain, sensitivity to local pressure and cold, and its location - typically in the distal phalanx. Manifestation of extradigital occurrence is possible. Single lesions are most common in adult females, while multiple lesions are prevalent in children and adolescents, generally those with a positive family history. The diagnosis is clinical with the aid of ultrasonography and magnetic resonance imaging, confirmed by histopathological examination.
Keywords: Diagnosis; Glomus tumor; Residential treatment; Treatment outcome

Resumo: Tumor glômico é neoplasia dolorosa derivada do glomo terminal, cuja função é regular a circulação sanguínea e a temperatura corpórea. Apesar da sua raridade, merece atenção especial por seus sintomas de dor paroxística, sensibilidade à pressão local e ao frio, além da sua localização típica na falange distal. Manifestação extradigital é de ocorrência eventual. Lesões únicas são mais comuns em adultos do sexo feminino, enquanto as múltiplas prevalecem em crianças e adolescentes, geralmente com história familiar positiva. O diagnóstico é clínico, auxiliado pela ultrassonografia e ressonância nuclear magnética. A confirmação é feita pelo exame histopatológico.
Palavras-chave: Diagnóstico; Resultado de tratamento; Tratamento domiciliar; Tumor glômico

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