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A Case Report: Glomus Tumor Mimicking Orf Infection

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Abstract

Observation: Glomus tumor is a rare vascular tumor that is most commonly located in hand and usually of benign nature arising from the vascular and thermoregulatory glomus body of the skin. However, malignant degeneration can sometimes occur. These hamartomas account for 1% to 5% of all soft tissue tumors of the hand and commonly but not exclusively related to nail bed. The classical presentation is severe pain, temperature sensitivity and localised tenderness. The diagnosis is usually made on the basis of clinical history and examination but can be delayed due to non-specific symptoms and the rarity of disorder. The aim of our report is to describe a glomus tumor presented as orf infection in a man at his hand appearing in terms of clinical presentation and localization.

Introduction

Glomus tumor also named as glomangioma is a benign tumor that arise from one of the subcutaneous glomus bodies, which is found in the adventitial layer of the blood vessels. The glomus body is a specialized arteriovenous anastomosis that is involved in thermoregulation [1]. Glomus bodies are present in the stratum reticularis of the dermis throughout the body, but they are more numerous in the digits, the palms, and the soles of the feet. Glomus tumor can occur anywhere in the skin or soft tissue, even in the mucosa. The tumor is characterized clinically by intense, often pulsating pain that may be spontaneous or provoked by a slight trauma and usually presents as a firm, purplish, solitary nodule of the extremities, most commonly in the nail bed [2]. Of all hand tumors, 1%–2% are glomus tumors. Multiple glomus tumors are present in 2.3% of the cases [3]. The average age of patients at diagnosis ranges from 30 to 50 years. Digital glomus tumor is relatively uncommon. These account for approximately 1% of all hand tumors and men are affected less frequently than women [4]. The treatment is surgical excision and complete resolution of symptoms is achieved. Malignant change has been reported but is extre-

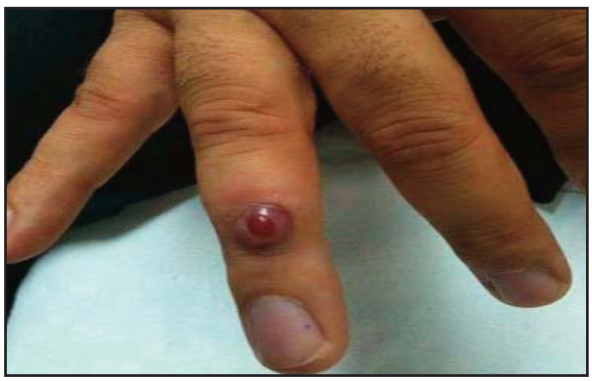

Figure 1. The lesion on the dorsal aspect of the 4th finger of right-hand.

mely rare. Malignant glomus tumor is usually locally invasive, although it can metastasize [**5**].

Case Report

A 41-year-old man with no past medical history, presented with a painless nodular lesion on the fifth right finger, evolving for one month. The lesion was a painless targetoid nodule, having 1.5 cm diameter, with red glossy center surrounded by a vesicular erythematous halo. (**Figure 1**). There was no history of trauma. The patient neither had fever nor lymphadenitis, as well as general symptoms. We have considered orf infection and treated the patient with non-specific antibacterial treatment for 15 days. On follow up visit, as the lesion revealed no change, biopsy was performed. The specimen macroscopically consisted of multiple fragments of tan and white tissue, the largest of which was measured 4x3x2mm. Microscopic examination demonstrated prominent vascular structures with perivascular nests of glomus cells, positive with SMA staining smooth muscle antigen (SMA) diagnostic for glomus tumor of the glomangioma type (**Figures 2 and 3**). The ultrasonographic imaging of right hand is performed to evaluate for existence of other lesions and no lesion is detected. Total excision is performed. The patient is without recurrence for one year.

Discussion

Glomangioma is a rare, slow growing and painful benign hamartoma, originate from the modified smooth muscle cells of the glomus body, which is found in the adventitial layer of the blood vessels [**1**]. Glomus bodies are highly concentrated at the tips of digits, especially under the nail. Thus, the tumors are usually in the subungual area, related to the nail bed. The diagnosis is usually made on the basis of the clinical history and examination [**6**]. Patients may notice a bluish discoloration beneath the nail and the nail fold may become elevated as the tumor proliferates within the enclosed space. The differential diagnoses should include local infection or osteomyelitis, osteoid osteoma, painful conditions of the nail, malignancy and inclusion cysts. One of the distinguishing features of the glomus tumor is the classic triad of symptoms: hypersensitivity to cold, paroxysmal severe pain and pointed tenderness in the finger. There are three main clinical diagnostic tests. The first is *Love*'s pin test, in which the head of a pin is pressed gently against the tender lesion to localize the pain. After the patient feels severe pain, a tourniquet is applied to the base of the digit and test is repeated then it is called *Hildreth*'s test. For a positive result, the patient should not experience any pain. The last test is a cold sensitivity test that produces increased pain when the finger is exposed to cold [**7**].

Ozdemir at al. evaluated sixty patients who underwent surgery for glomus tumors of the finger. In this study, the most common symptom was pain (67%), which intensified when, exposed to cold in 42%. Other symptoms included tenderness in 37 patients (62%), swelling in the finger tip in 6 patients (10%) and nail deformities in 34 patients (57%). The time to surgery from the onset of symptoms ranged from six months to 30 years (mean 6 years) [**8**]

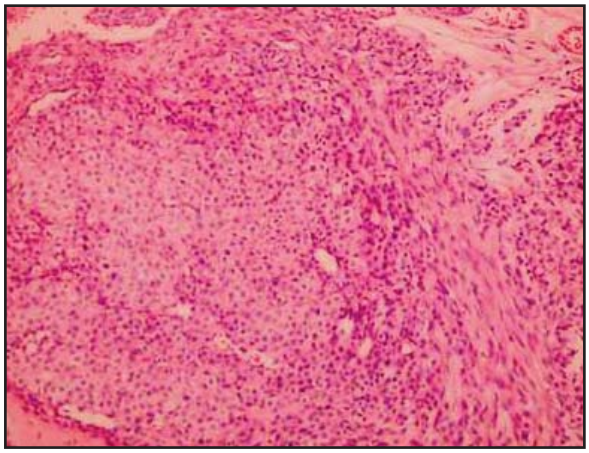

Figure 2. The histopathological image (hematoxylin-eosin staining H&E, original magnificationX10)

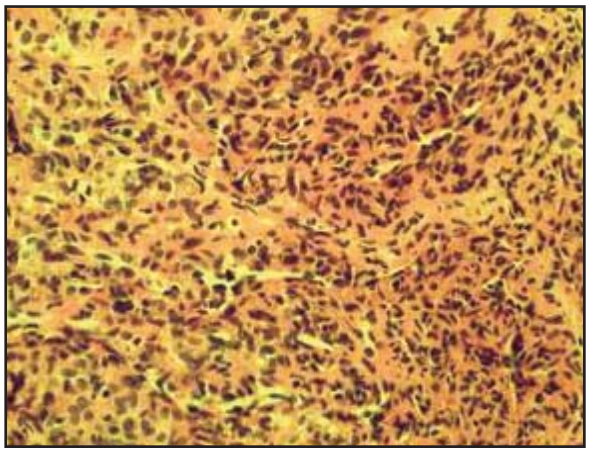

Figure 3. The histopathological image positive with SMA staining, original magnification X400

The only treatment of primary glomus tumor is surgical excision. Recurrence is unusual and is most likely related to incomplete excision or undetected multiple lesions. Extirpation is usually curative, although the pain may take several weeks to disappear. Malignant change has been reported but is extremely rare. Malignant glomus tumours are usually locally invasive, although they may metastasize [**9**].

Orf is an infectious mucocutaneous disease due to a parapoxvirus. It is more frequent in professionally exposed population as veterinary, butchers. But, in our country, the frequency of the orf increases after the feast of the sacrifice and remains undiagnosed because patients do not consult. The diagnosis may be confirmed by electron microscopy, conventional histopathology or by isolation of the virus by PCR. After an incubation period of 3–7 days, parapoxvirus infections produce 1–3 painful lesions measuring 1-2 cm in diameter. During the next 6–8 weeks, the lesion passes through 6 clinical stages: maculopapular, target, acute weeping, nodular, papillomatous, and finally regressive stages. Information on the benign character of the disease and reassurance of the infected patient are very important because lesion usually resolves spontaneously [**10**]. The morbidity of orf is far higher than its mortality. The preferred location of lesions is the hands. The diagnostic is by the anamnesis and the clinical characteristics of the lesions except when it occurs in a particular form. The complications are nearly exclusively related to the unawareness of the virus in form of inappropriate medical acts. The evolution is spontaneous and the unique treatment is the prophylaxis of bacterial infection as well as a constant surveillance.

Although the history and clinical appearance was compatible with orf infection in our patient, by histopathological diagnosis was completely different. Therefore, glomus tumor should also be considered in the differential diagnosis of painless lesions settled in hand and diagnosis should be confirmed by histopathological examination when necessary.

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