A nodule on the forearm

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Abstract

Glomus tumors are benign tumors of the skin. Clinically, these tumors can present as solid, painful subcutaneous nodules, frequently seen on the hand (particularly subungual region). Glomangiomyomas are the least common histological type of glomus tumor. In the literature, there are only a few glomangiomyoma cases of the forearm location. We report a patient with a painful nodule, diagnosed as glomangio-myoma. Surgical excision was performed and no recurrence was observed after 5 years' follow-up.

Keywords: glomangiomyoma, forearm, extradigital, glomus tumor

Introduction

Glomus tumor, arises from the glomus bodies and is an uncommon neoplasm. Histologically, the tumor cells consist of varying proportions of glomus cells, vascular structures, and smooth muscle tissue. Glomangiomyoma is a rare variant of glomus tumor. In the literature, only a few glomangiomyoma cases have been reported on the forearm. Herein, we report a glomangio-myoma of the forearm in a 25-year-old man.

Case Synopsis

A 25-year-old man complained of a painful nodule on the left elbow for two months. He was diagnosed with epidermal cysts with secondary infection at other hospitals before and was given antibiotic orally. He took 300mg/d of cefdinir by mouth for 15 days. The nodule did not resolve but increased in size.

He denied any family history of tumors or history of injury. Skin examination showed a 1.7cm×2.3cm sharply defined smooth surfaced nodule on the left elbow, (**Figure 1**). The nodule was soft and tender on palpation. A surgical biopsy specimen was obtained under local anesthesia. Hematoxylin-eosin stain of the biopsy showed that the tumor was in the dermis and subcutaneous tissue (**Figure 2A)**. On the upper part of the histological section, proliferation of interlacing fascicles of smooth-muscle cells with abundant eosinophilic cytoplasm were arranged in a bundle pattern (**Figure 2B)**. The lower part of the histological section was an encapsulated, well-defined mass with many vessels lined with endothelial cells; dilated blood vessels contained red blood cells. Round or cuboidal glomus tumor cells were arranged around the blood vessels. The individual tumor cell was round with eosinophilic

Figure 1. *Nodule on the left elbow.*

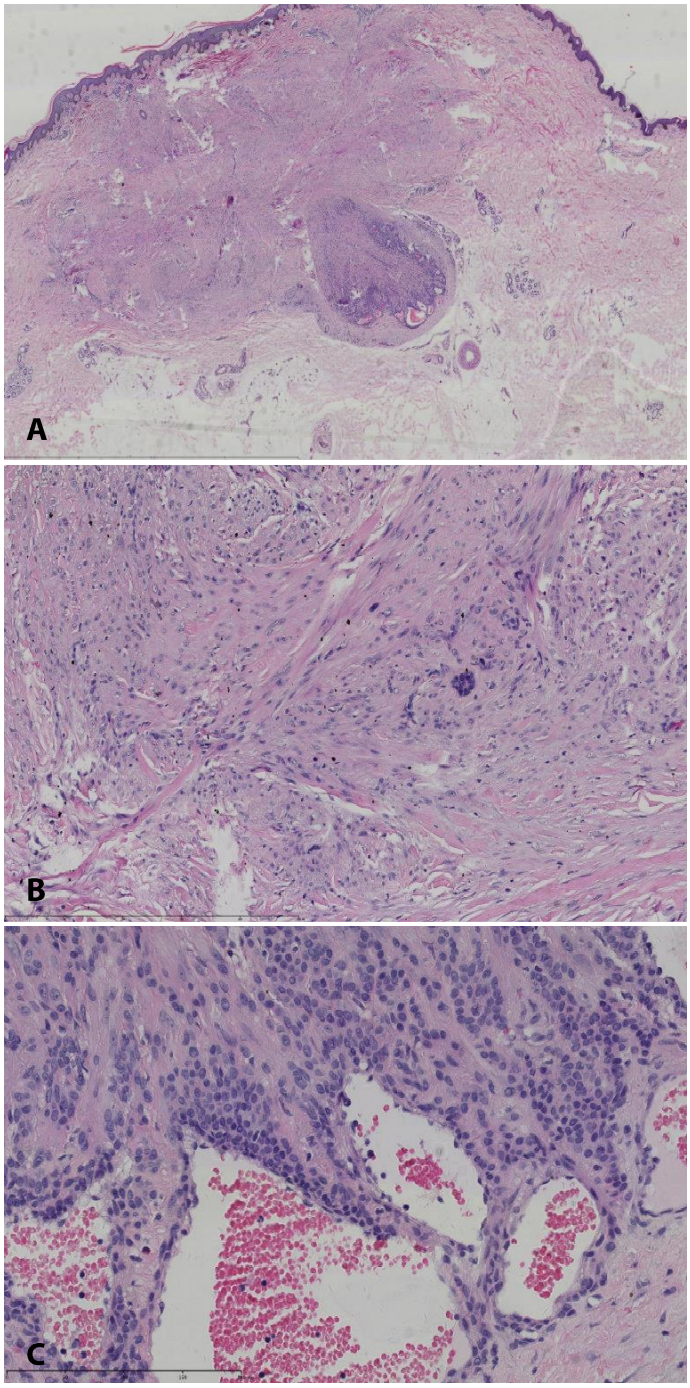

Figure 2. ***A)*** *Nodular proliferation in the dermis and subcutaneous tissue. H&E, 4×.* ***B)*** *Proliferation of interlacing fascicles of smooth-muscle cells. H&E, 40×.* ***C)*** *Round or cuboidal cells arranged around the blood vessels. H&E, 40×.*

cytoplasm (**Figure 2C**). With immunohisto-chemistry, both tumor cells were diffusely positive for smooth muscle actin (SMA), (**Figure 3A**), but negative for CD34. Vascular channels were positive for CD34 (**Figure 3B**). Based on the clinical and pathology features the diagnosis of glomangiomyoma was made. Surgical excision was performed and no recurrence was observed over a 5-year follow-up.

Case Discussion

Glomus tumors are neoplasms with proliferation of glomus cells. The tumors are always solitary, skin-colored or slightly dusky blue nodules in the dermis and subcutaneous tissue. The fingers and toes are the predilection sites, particularly in the subungual region [1]. When the tumor is extradigital it can often be misdiagnosed [2]. The tumors are always painful and sensitive to cold. Histopathologically, the glomus tumor proper is a well-circumscribed or encapsulated dermal tumor which may extend into the subcutis. It is composed of solid aggregates of glomus cells surrounding inconspicuous vessels. Immunohistoche-mically, vimentin, SMA, laminin, and type IV collagen are positive. CD31, CD34, S100, and desmin are negative, but positivity for CD34 may be

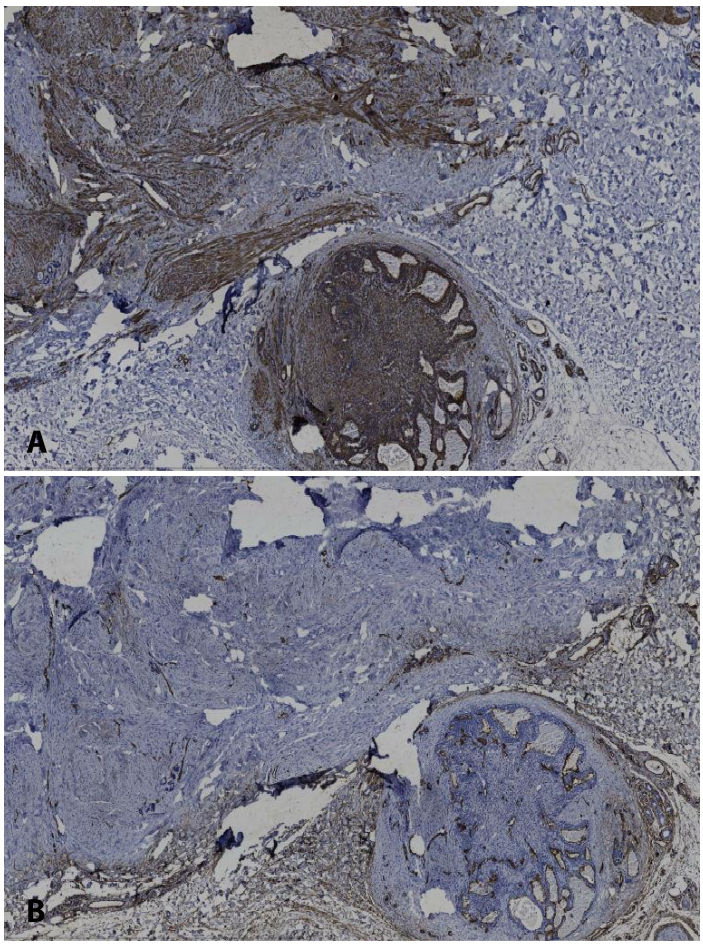

Figure 3. ***A)*** *Glomus tumor and smooth-muscle cells were diffusely positive for SMA, 40×.* ***B)*** *Glomus tumor and smooth-muscle cells were negative for CD34, 40×.*

seen [3]. If smooth muscle fibers are observed in a glomangioma in which both solid glomus tumor and vascular components are condensed, then the lesion is named glomangiomyoma. Total excision is the preferred method of treatment. With the inclusion of surrounding normal tissue, a wide excision should be performed.

There are only three prior case presentations described which were related to glomangio-myoma of the forearm to our knowledge [4-6].

Conclusion

Glomangiomyoma is the least common histological type of glomus tumor, presenting as a solitary, skin-colored or slightly dusky blue nodule. It can be frequently seen on the hand (particularly the subungual region). When the lesion is extradigital, it is often misdiagnosed.

Potential conflicts of interest

The authors declare no conflicts of interests.

Acknowledgements

This work was supported by National Natural Science Foundation of China (Number: 81703129).

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