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Dr. Swati Kadam
Head of Department, Inamdar Multispeciality Hospital. Pune, Maharashtra, India

Dr. Sneha Chavan
Consultant Pathologist, Inamdar Multispeciality Hospital. Pune, Maharashtra, India

Corresponding Author:
Dr. Sneha Chavan
Consultant Pathologist, Inamdar Multispeciality Hospital. Pune, Maharashtra, India

Glomangioma: Rare presentation over the back

Dr. Swati Kadam and Dr. Sneha Chavan

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Abstract
Glomangiomas are a rare benign variant of glomus tumors. They are cutaneous venous malformation that show glomus cells along the venous vasculature. Glomus tumors are most commonly found in digits of hands and feet. Extradigital locations are rare. We are presenting a case with a rare presentation over the back. As per the literature ours is the 6th case reported over back.

Keywords: glomangioma, extradigital, back, rare site

Introduction

Glomus tumors are benign mesenchymal neoplasms composed of cells resembling modified smooth muscle cells arising from glomus body. They are a combination of glomus cells, smooth cells and vasculature. The glomus body is a specialized form of arteriovenous anastomosis that is localized in dermal tissue and is responsible for thermoregulation. They are usually benign with very rare malignant variants [1].
Glomus tumors can be classified into 3 main types based on their dominant component:

1. Solid: mainly glomus cells.
2. Glomangioma: mainly blood vessels.
3. Glomangiomyoma: mainly smooth muscle cells [2]

Glomangiomas are usually present over the hands, particularly the fingers. They are painful subungual lesions. Extra digital localized glomus tumors are very rarely seen [3].
We are reporting a case of glomangioma over the back, which is a rare site of presentation. Extensive study of literature showed only 5 cases of glomangiomas reported over the back before our case.

Case report

15 year old male patient presented with bluish discoloration over lower left scapular region. The lesion was present since birth and was gradually increasing in size since 1-2 years. Patient had pain only on deep pressure.
On clinical examination, there was a bulging bluish lesion over the scapula measuring 3x 3cm.

MRI: showed subcutaneous T1-T2 hyperintense lesion measuring 4.3 cm. Suggestive of subcutaneous hemangioma/ low flow vascular malformation.
Excision of the lesion was done. Specimen was sent for histopathological examination

Gross: the excised skin lesion measured 5x 5 cm. Skin was unremarkable after formalin fixation. Cut section showed hemorrhagic spotty areas in the subcutaneous tissue.
Microscopy showed skin with a benign vascular tumor beneath. The tumor cells were arranged in sheets & lobules. Numerous dilated & congested vascular channels surrounded by round glomus cells were noted. Cells had indistinct borders and round punched out nucleus in amphophilic to eosinophilic cytoplasm noted. Chromatin was homogenous and bland with inconspicuous nucleoli there was no inflammation. No mitosis or necrosis was noted.

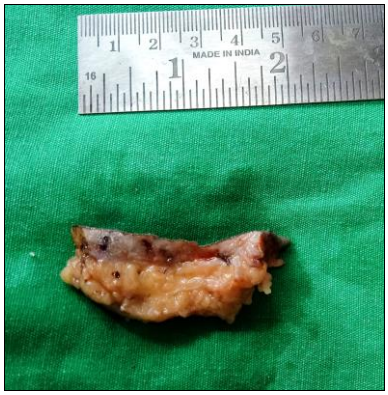

Fig 1: Excised skin lesion showing hemorrhagic spots in the dermis and subcutis

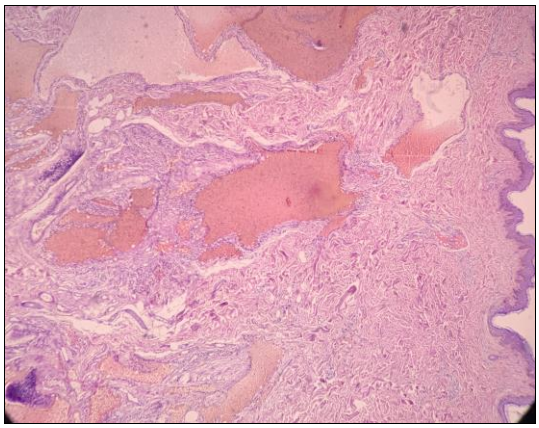

Fig 2: Dilated blood vessels lined by glomus cells seen [H&E: 10X]

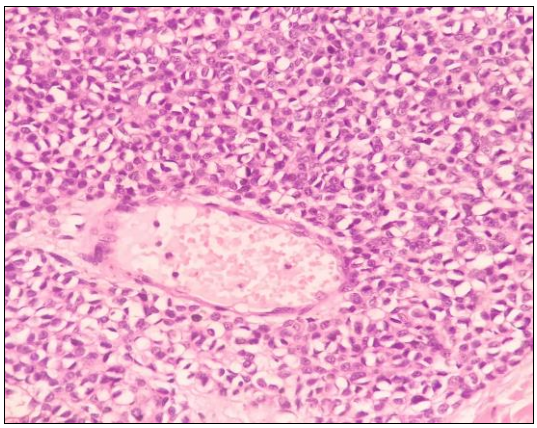

Fig 3: Glomus cells with round nucleus and amphophilic cytoplasm [H&E: 40X]

Discussion

The term glomangioma was first described by Bailey in 1935.Glomus tumors represent 1-2% of soft tissue tumors. The solid variant is the most common accounting for 75% followed by glomangiomas which constitute about 20% and the rarer variant glomangiomyoma which accounts for 5%.

Glomangiomas often present during childhood as small bluish nodules situated deep in the dermis, widely scattered over the skin surface.

Glomangiomas have a predilection for the upper extremities especially palms, wrists, forearms and subungual regions (75%) which have rich supply of glomus bodies [4].

Glomangiomas have been reported over unusual sites such as such as ankle, foot, knee, thigh and hip.

Back is a rare site for glomangiomas. [Table 1]

Table 1: Previous cases of glomangiomas over the back

First author	Site	Age/sex
Marina Rodriguez, 2006 [5]	Left side of back	1y/M
Jennifer G Schopp, 2009 [6]	Multiple lesions over b/l arms, chest and back	15y/M
Alena Borovaya, 2011 [7]	Multiple lesions over upper back, lumbar area and right thigh	15y/M
M.G. Gopal, 2014 [8]	Multiple asymptomatic lesions over chest, back, lower extremity	30/M
Alberto Conde Taboada. 2017 [9]	Multiple lesions over upper and lower extremities	4 month /F

They are more common in males and present in young adults. They can be solitary or multiple. Glomangiomas can be sporadic, however autosomal dominant inheritance pattern is more common with some types being mapped to band 11q23.6 Familial cases have been reported with incomplete penetrance and variable expression.

Complete excision of glomangiomas have favourable prognosis. Recurrence after surgical excision is seen in 10% to 33% of cases. The chance of malignancy is very low. Size greater than 2 cm, deep lesions, muscle and bone invasion, and high mitotic activity are risk factors for malignancy [2].

One of the differential diagnosis for glomangiomas are venous malformations. However, unlike venous malformations, they demonstrate single-to-multiple rows of glomus cells. It is important to distinguish glomangiomas from blue rubber bleb nevus syndrome (BRBNS), which is associated with venous malformations on both the skin and gastrointestinal tract. The BRBNS venous malformations of the gastrointestinal tract can be associated with clinically significant gastrointestinal bleeding.

Conclusion

Glomus tumors are rare cutaneous tumors, of which glomangioma variant is even more-rare. Only 5 cases of glomangiomas over the back have been reported so far. Ours is the 6th case report.

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