



Glomus tumor of penis- A rare case

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ABSTRACT

Glomus tumors are rare, painful, and benign soft tissue tumors of the skin arising from the glomus body, an arteriovenous thermoregulatory structure. This lesion is usually found on the extremities. Glomus tumor involving the external genital organs including penis is extremely rare. Until now, only few cases have been reported in the available literature. A 22 year old male patient presented with a painful nodule over the penis. The pathologic diagnosis was glomus tumor of the glans penis. We report herewith a case of glomus tumor of penis diagnosed on histopathologic examination. Glomus tumor, being a benign neoplasm, complete extirpation of the glomus tumor is the treatment of choice.

Keywords: Glomus tumor, painful nodule, penis

INTRODUCTION

The glomus tumor is an uncommon hamartoma, originating from the glomus body.¹ The characteristic glomus tumor is composed of endothelium-lined vascular spaces surrounded by glomus cells, arising from the arterial end of the glomus body.¹ The majority of glomus tumors are small, benign neoplasms that occur in the dermis or subcutis of the extremities.² It is unusual for a glomus tumour to be located at the penis.³ To our knowledge, only few cases of penile glomus tumor have been reported in the literature.³

The diagnosis is made by histopathologic examination unless it presents as solitary painful nodule at common sites such as the nail bed. Treatment is surgical and comprises complete local excision of the tumor. Other painful lumps on the penis include Peyronie's disease, penile phlebothrombosis and rarely epithelioid hemangioma.¹

CASE DETAILS

Case history

A 22 year old male patient presented with a painful nodule over the dorsum of the glans penis which had developed over the last six months. Complete surgical resection of the nodule was performed. Gross pathology showed a skin covered nodular, well-defined, soft tissue mass measuring 1.5cm in diameter. The cut sections showed solid, firm, grayish congested tissue.

Histopathology

Histopathological examination revealed a well-circumscribed nodule composed of numerous small, vascular lumina, lined with a single layer of flattened endothelial cells. The vascular spaces were surrounded by sheets and nests of uniform, round cells having pale, central nuclei and moderate, faint eosinophilic cytoplasm. The nodule was attached to dilated, thick-walled blood vessels. The tumor cells had no prominent nuclear pleomorphism. No mitotic figures were found. A diagnosis of glomus tumor was made.

GJMEDPH 2012; Vol. 1 issue 6

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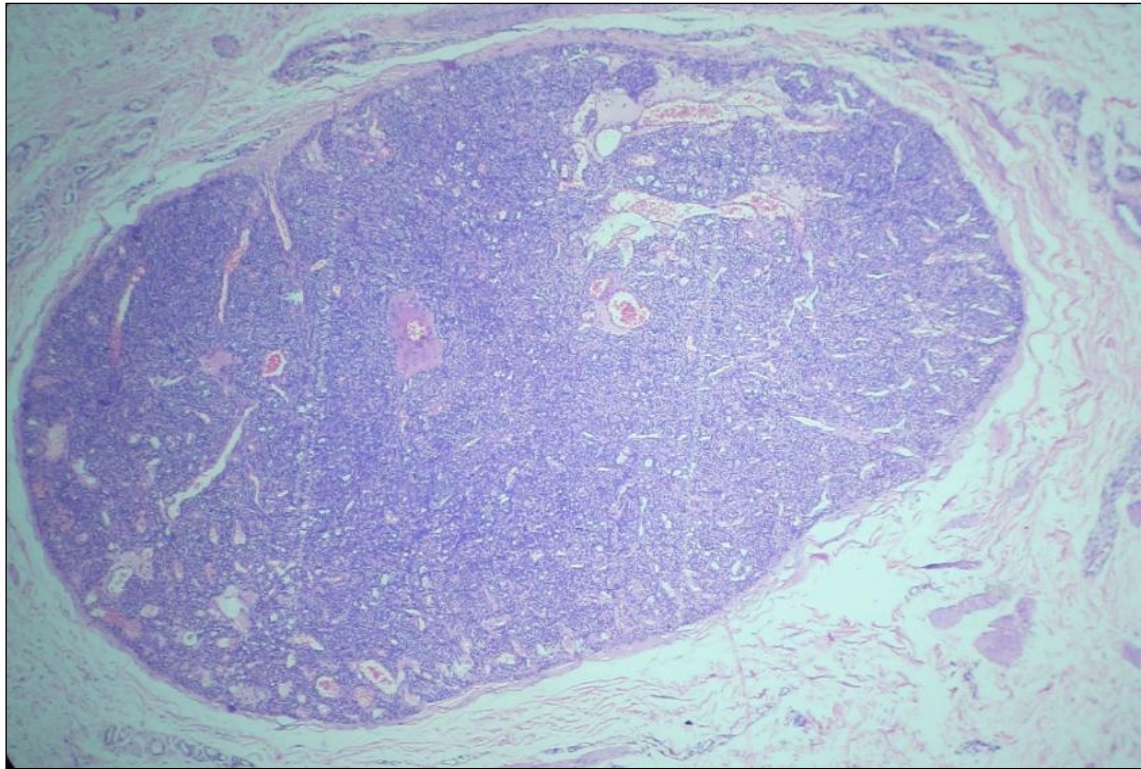
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Funding—none

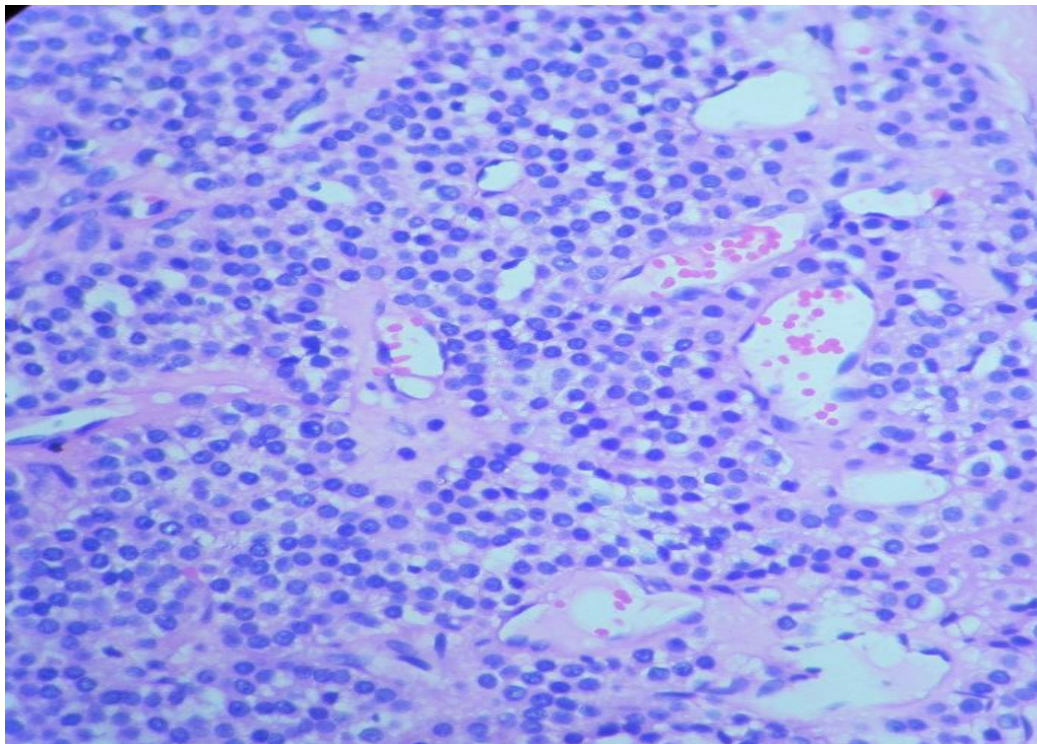
Conflict of Interest—none

Acknowledgement

We are grateful to Dr. Meenakshi Mathur, Dean, ESI PGIMS, Andheri (E), Mumbai, for her encouragement and support.



Histopathology: Scanner view - Nodule composed of numerous small, vascular lumina, surrounded by solid sheets of glomus cells (Hematoxylin and eosin stain, x 40).



Histopathology: High power view - Uniform glomus cells surrounding the vascular spaces (Hematoxylin and Eosin stain, x 400).

DISCUSSION

Glomus tumours (glomangioma) are usually uncommon benign, slow growing and painful tumours.² They arise from the modified smooth muscle cells of the glomus body, which is found in the adventitial layer of the blood vessels.¹ The normal glomus body is an arteriovenous shunt related to thermoregulation, located mostly in the digits.² Wood first described the glomus tumor in 1812.³ Masson, in 1924, described the histopathology of glomus tumor.⁴ Grauer and Burt first reported two cases of penile glomus tumors in 1939.³

The tumour usually presents as a painful, firm, purplish, solitary nodule of the extremities, most commonly in the nail bed.² The majority of glomus tumors are found as the solitary type. The disseminated and congenital types of multiple glomus tumors present with lesions that are distributed over the entire body surface.⁶ The glomus tumour can occur anywhere in the skin or soft tissue, even in the gastrointestinal tract. It is a rare lesion on the male genitalia.³

The pre-operative diagnosis is generally difficult, especially when it occurs at such an infrequent site as penis. Hence, in such cases, its diagnosis depends solely on the histopathological examination. Histomorphology of glomus tumors is distinctive. Benign glomus tumors consist of small uniform rounded glomus cells that are located around the walls of dilated vessels.¹

The differential diagnoses of painful lumps on the penis include Peyronie's disease, penile phlebothrombosis and rarely epithelioid hemangioma.¹ Other penile nodular lesions are usually benign and include chronic inflammatory conditions such as penile cutaneous horn, leukoplakia, and pseudoepitheliomatous, Condyloma acuminata, keratotic micaceous balanitis (PKMB).⁷ Among the malignant neoplasms of the penis, squamous cell carcinoma accounts for 98%, followed by verrucous carcinoma. Sporadic cases of melanoma, basal cell carcinoma, and Paget disease have also been reported.⁷ All benign penile nodular lesions are suitable for treatment by surgical excision.

Glomus tumor of the penis is very rare and only very few cases have been reported till date.³ Glomus tumor is a benign lesion and the conservative surgical excision is the treatment of choice. Hence it is important to diagnose these tumors correctly as recurrence is very rare.

CONCLUSION

As glomus tumor is a rare, benign neoplasm, its occurrence at unusual site as external genitalia should be kept in mind as optimal management is complete local excision with no further recurrence. Glomus tumor of the penis should be considered in the differential diagnosis of patients presenting with painful penile lumps. The described case shows that in the case of glomus tumour, a definitive diagnosis can only be made after histopathological examination of the excised tumors.

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