

Schwannoma of the penis, presenting as a scrotal mass, rare entity with an uncommon presentation

Ujwal Kumar, Nawal Kishore Jha¹

Department of Urology and Renal Transplant, SMS Medical College, Jaipur, Rajasthan, ¹Department of General Surgery, R.I.M.S, Ranchi, Jharkhand, India

Abstract Schwannomas are benign nerve sheath tumors that are seen either sporadically or in patients of neurofibromatosis. This tumor is common in head, neck, and extremities. Penis is a rare site for this tumor. To the very best of our knowledge, <34 cases of penile schwannoma have been reported in literature till now, but none had presented as scrotal mass. Here, we report a case of penile schwannoma in a 16-year-old male boy who presented in our outpatient department with a slowly growing scrotal mass. Our patient did not have any other feature of neurofibromatosis. The patient after investigation underwent surgical excision and had no recurrence on follow-up of 5 years.

Keywords: Antoni A, Antoni B, schwannoma

Address for correspondence:

Dr. Ujwal Kumar, Room No. F25, R.D. Hostel, S.M.S Medical College, J.L.N. Marg, Jaipur - 302 004, Rajasthan, India. E-mail: ujwalpathak@gmail.com

Received: 15.03.2017, **Accepted:** 26.05.2017

INTRODUCTION

Schwannomas are benign encapsulated tumors of the nerve sheath which are either seen sporadically or in patients of neurofibromatosis. These tumors are common from peripheral nerve sheaths in head, neck, and extremities in the third decade of life. Schwannomas have been found to grow very slowly. Even though the penis has a rich nerve supply, penile schwannomas are very rare. To the best of our knowledge, <34 cases^[1] have been reported till now in English literature, and ours is the largest of all the reported cases along with atypical presentation of scrotal mass.

CASE REPORT

A 16-year-old male presented to us with a painless slowly growing swelling in the scrotal region for the past 2 years [Figure 1]. There was no history of penile or scrotal trauma

or any sexually transmitted disease. On examination, a firm nodular mass was found present in the left hemiscrotum pressing on the ipsilateral testis but free from the testis and attached to the penis [Figure 2]. The size of the swelling was 6 cm × 7 cm, and there was no inguinal lymphadenopathy. All blood investigations were within normal limits, and ultrasonography revealed a 7 cm × 8 cm hypoechoic mass present in the left scrotum pressing on the ipsilateral testis arising from the penis. Fine needle aspiration cytology revealed a benign tumor. Surgical exploration was done, and firm mass about 8 cm × 8 cm arising from the proximal corpora was found. The mass was excised [Figures 3 and 4], and tissue was sent for histopathological examination. Postoperative period was uneventful, and biopsy report revealed schwannoma Antoni A and Antoni B regions [Figure 5]. Immunohistochemistry revealed positivity for S-100. Follow-up till now, i.e., after

Access this article online	
Quick Response Code:	Website: www.urologyannals.com
	DOI: 10.4103/UA.UA_38_17

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

For reprints contact: reprints@medknow.com

How to cite this article: Kumar U, Jha NK. Schwannoma of the penis, presenting as a scrotal mass, rare entity with an uncommon presentation. Urol Ann 2017;9:301-3.

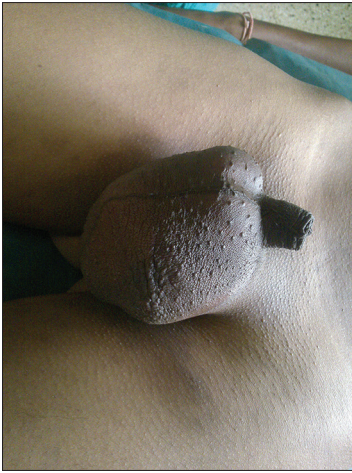


Figure 1: Scrotal swelling

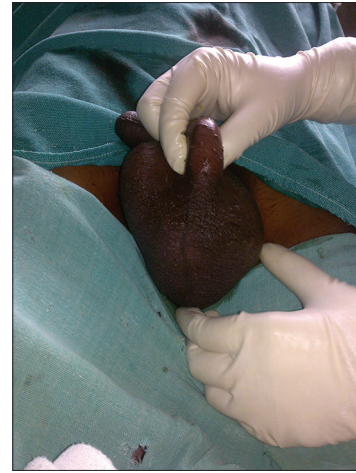


Figure 2: Mass on examination



Figure 3: Intraoperative photograph of mass excision

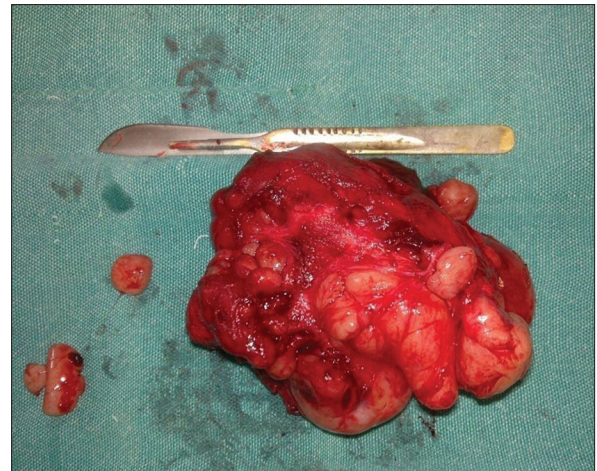


Figure 4: Excised mass

5 years is uneventful with the patient having normal erectile function.

DISCUSSION

Schwannomas are benign nerve sheath tumors which are very slow growing. Because they grow slowly, they are present for many years before diagnosis. Very rarely are these tumors malignant, and when found, they are associated with Recklinghausen's disease.^[2-4] If the schwannoma is at distal penis, it may interfere with sexual intercourse. There is no definitive evidence about the relationship between schwannoma and erectile dysfunction,^[5-7] but one case report raised doubt about association between erectile function and penile schwannoma.^[8] Differential diagnosis of this superficial tumor in the penis should include lipoma, atheroma, sarcoma, Peyronie's disease, and fibrosis.^[9] If the lesion presents as a scrotal mass, as was in our case, then testicular malignancy can also be considered as one of the differential diagnoses, but proper examination and

imaging can easily differentiate between the two. Lipoma and atheroma being softer and more superficial can be easily differentiated from penile schwannoma. Peyronie's disease patients present with complaints of erectile dysfunction and painful intercourse which is extremely rare in cases of penile schwannoma. In addition to excision biopsy of the tumor, imaging studies, such as ultrasonography and magnetic resonance imaging, can be informative diagnostic modalities in diagnosing this rare tumor. The magnetic resonance signal is intermediate on T1-weighted images and bright on fat saturated T2-weighted images. The lesions also show homogeneous enhancement after injection of a gadolinium contrast. The signal changes are compatible with the myxoid content of the solid tumor, and these features help in diagnosing penile schwannoma preoperatively.^[10] Fine needle aspiration cytology has been shown to help in preoperative diagnosis of this extremely rare tumor.^[11] Histopathologically, the hallmark of a benign schwannoma are the biphasic Antoni A and Antoni B areas. Antoni A areas have compact spindle cells with indistinct cytoplasmic

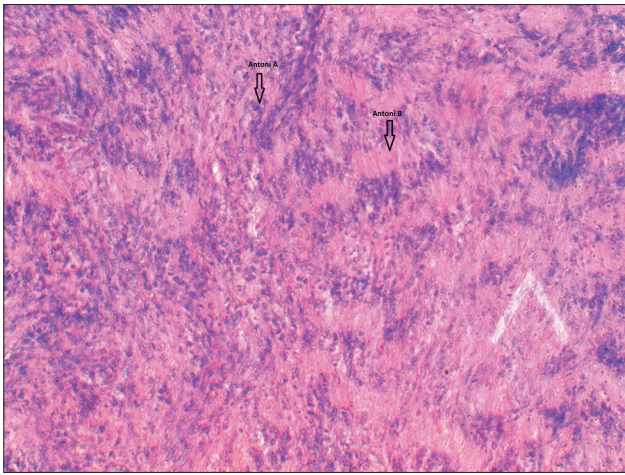


Figure 5: Histopathological slide showing Antoni A and Antoni B areas of schwannoma

borders arranged in bundles or interlacing fascicles. Antoni B areas are characterized by spindle cells arranged haphazardly in the myxoid stroma. Immunohistochemically, schwannomas are strongly positive for S-100 protein.^[12] None of the cases reported have had recurrence till follow-up.

CONCLUSION

Schwannomas of the penis are extremely rare but should be included in the differential diagnosis for solid penile tumors and scrotal masses as in our case. Most penile schwannomas are benign, and surgical excision is enough for management. Histopathology and immunohistochemistry help in diagnosing this extremely rare tumor.

Acknowledgment

The authors acknowledge the support of Dr. Ravi Shankar, Department of Pathology, R.I.M.S, Ranchi.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Nguyen AH, Smith ML, Maranda EL, Punnen S. Clinical features and treatment of penile schwannoma: A systematic review. *Clin Genitourin Cancer* 2016;14:198-202.
2. Aşçı R, Danacı M, Gür S, Akdeniz E, Barış YS. Complete resection of penile schwannoma without sexual dysfunction. *Turk J Urol* 2010;36:207-10.
3. Yeh CJ, Chuang WY, Huang ST, Jung SM. Schwannoma of the penis: A report of two cases. *Chang Gung Med J* 2007;30:555-9.
4. Lin TC, Wu PY, Lin TY, Lee TL. An infrequent plexiform variant of schwannoma of the glans penis: A rare finding. *Asian J Androl* 2010;12:455-7.
5. Algaba F, Chivite A, Rodríguez-Villalba R, Sarquella J, Martínez-Montelongo R, Ruiz-Castañe E. Schwannoma of the penis: A report of 2 cases. *J Androl* 2003;24:651-2.
6. Chan WP, Chiang SS, Huang AH, Lin CN. Penile frenulum neurilemoma: A rare and unusual genitourinary tract tumor. *J Urol* 1990;144:136-7.
7. Kandeel FR, Koussa VK, Swerdloff RS. Male sexual function and its disorders: Physiology, pathophysiology, clinical investigation, and treatment. *Endocr Rev* 2001;22:342-88.
8. Liu WY, Chang CH, Tseng GC. Multiple penile schwannomas. *MedGenMed* 2006;8:35.
9. Dehner LP, Smith BH. Soft tissue tumors of the penis. A clinicopathologic study of 46 cases. *Cancer* 1970;25:1431-47.
10. Lee CH, Wu CJ, Chen YL, Huang GS, Tang SH. Multiple penile schwannomas and their magnetic resonance imaging characteristics. *J Androl* 2012;33:167-9.
11. Malhotra KP, Shukla S, Gupta A, Awasthi NP, Husain N, Dhayal LR. Penile neurilemoma: Utility of fine-needle aspiration cytology in diagnosis of a rare entity. *J Cytol* 2014;31:176-8.
12. Weiss SW, Goldblum JR. Benign tumors of peripheral nerves. In: Weiss SW, Goldblum JR, editors. *Enzinger and Weiss's Soft Tissue Tumors*. 4th ed. St. Louis: Mosby; 2001. p. 1146-73.