

## Oncology

## Isolated penis schwannoma: A rare case report

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## Introduction

Schwannoma is mainly originated from Schwann cell, can be benign or malignant. Schwannoma can occur in various parts of the body. So far, there were only thirty-three penis schwannoma cases which were located penile dorsal, ventral, body/shaft, glans and root.<sup>1</sup> We presented a case of a schwannoma of the penis ventro.

## Case presentation

A 39-year-old man presented with a small mass on the ventro of his penis. He did not suffer from urinary tract infection, hematuria, odynuria, and hematospermia. Erection was normal. He discovered it 3 months ago. The doctor suggested he receive the surgery, but he refused. Now, he found that the mass increased gradually and required surgical resection. He had a history of appendectomy in 22 years ago. He had no history of the neurinoma of the spinal cord. Physical examination revealed solid mass on the ventro aspect of the penis and located on the middle ridge between the corpus cavernosum and corpus spongiosum. The mass was the size of a peanut, border clear and no tenderness. Laboratory test and urine analysis were normal.

The mass was completely surgical resection. We found no invasion of the corpus cavernosa and corpus spongiosum penis in operation. The patient recovered well with no complications.

Histologically, the mass size about 1.2 \* 1.1 cm was grey section, encapsulated by fibrous capsule (Fig. 1a), and was composed of bundles of spindle-shaped cells and ovoid cells (Fig. 1b). The cells did not see obvious atypia, a small number of nuclei increased. Nuclear fission cannot be noted. Immunohistochemical staining indicated S100 was positive (Fig. 1b), desmin, smooth muscle actin and CD34 were negative. Ki67 was less than 2%.

## Discussion

Schwannomas may occur in various of the body, have been found most commonly on the limb, head and neck. However, schwannomas of urinary tract are very rare. There have been reported in prostate, spermatic cord, testicle,<sup>2</sup> bladder.<sup>3</sup> Schwannomas of the penis are exceedingly rare, and the average patient age was 39.2 years.<sup>1</sup> Schwannomas are usually solitary, asymptomatic tumor, painless, slow-growing.

Schwannomas of the penis was the first description in 1968.<sup>4</sup> Penile schwannomas are mostly benign. The mass was located the dorsal aspect of the penile shaft in most patients.<sup>1</sup> However, we found the mass on the ventro of the penis in this case. Sexual dysfunction included erectile dysfunction, abnormal penile curvature, pain with ejaculation, peyronie's disease, impotence and pain with intercourse was a common complaint.<sup>1</sup> The case in this paper was no symptom. He was prompted to seek medical care because of mass growing. Lee et al.<sup>5</sup> found that pain can be noted if the lesion grows in the layer between the Buck fascia and the tunica albuginea. Since the mass was located subcutaneous tissue and skin on the ventro of the penis. The case complains no pain.

Auxiliary diagnostics were performed magnetic resonance imaging (MRI) and ultrasound. The mass was found hypoechoic nodules and high vascularity on color Doppler ultrasonography.<sup>5</sup> But ultrasonography is less useful to diagnose Schwannomas.<sup>3</sup> The MRI characteristic showed high signal intensity on fat-saturated T2-weighted and intense enhancement on gadolinium-enhanced T1-weighted enable presurgical diagnosis of penile schwannomas.<sup>5</sup> Unfortunately, our case required surgical removal of the penile nodule and refused to receive the MRI because of economic reasons.

Histologic finding was mainly composed of spindle-shaped cells,

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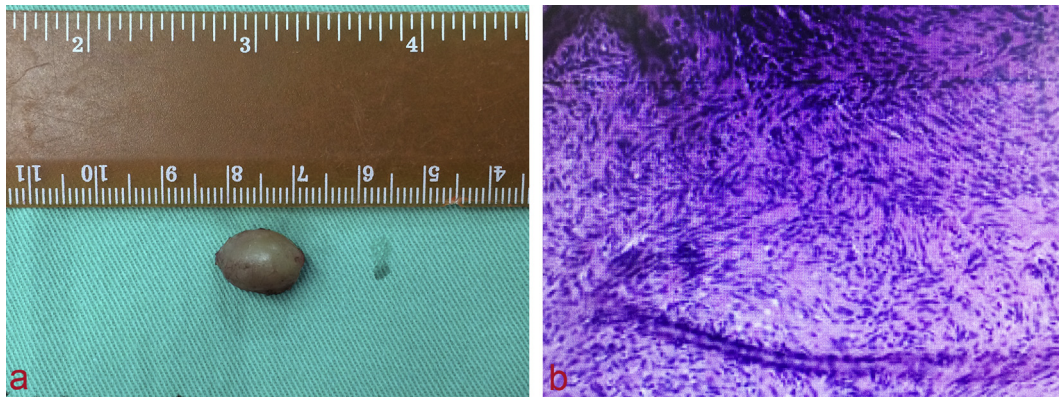
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**Fig. 1.** Gross specimen intraoperative and immunohistochemical staining postoperation. (a) Penile mass size about 1.2\*1.1cm. (b) Special staining using S100 protein and S100 was positive.

combined with immunohistochemical staining that S100 almost 100% positive, desmin and smooth muscle actin was negative.<sup>1</sup> The case was diagnosed the penile schwannoma according to the histologic characteristic and immunohistochemical examination. We performed the surgical resection the mass. There were no local recurrence and distant metastasis in 1-year follow-up.

### Conclusion

Penile schwannoma is extremely rare neoplasm. We reported the thirty-four case in penile schwannomas. The diagnosis was relied on histological and immunohistochemical characteristics. Surgical resection was the preferred choice of the treatment. We suggested the patients receive the regular follow-up because of the risk of recurrence.

### Conflicts of interest

All authors have no conflicts of interest.

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