



## Leiomyoma of scrotum: a case report

### Pathology

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### ABSTRACT

Leiomyoma is a benign tumour of smooth muscles. Scrotal leiomyomas are genital leiomyomas that arise from tunica dartos, first described by Forsters in 1858. These are rare tumours and have received little attention in the literature. We report here a solitary scrotal leiomyoma in a 48 year old male.

### KEYWORDS:

Leiomyoma, scrotum

### Introduction

Leiomyoma is a benign tumour of smooth muscles.<sup>1</sup> There are superficial and deep leiomyomas. Superficial leiomyoma of skin and subcutaneous tissue can be of three types; (a) tumour of arrector pili muscle (piloleiomyoma), (b) tumour of smooth muscle of blood vessels (angioleiomyoma), and (c) genital leiomyoma (from the smooth muscle of nipple, vulva and scrotum).<sup>2</sup> Cutaneous leiomyomas account for approx. 5% of all leiomyomas and genital such as scrotal leiomyomas, have an even lower incidence rate.<sup>3</sup> Siegel and Gaffey<sup>4</sup> demonstrated the rarity of this tumour finding only 11 cases in a review of 11,000 cases of scrotal tumours. Less than 50 cases have been reported in history.<sup>5</sup> After going through past literature, we found less than 5 cases reported from our country. So these are rare tumours and have received little attention in the literature.

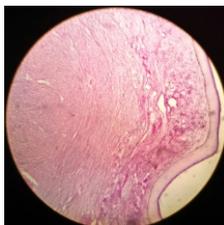
Keeping in view the rarity of this tumour, we report here a case of scrotal leiomyoma which was unique to us, along with review of the past literature.

### Case Report

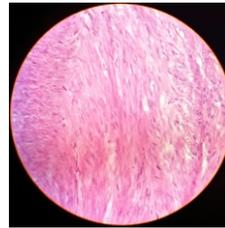
A surgically excised specimen with provisional diagnosis of "sebaceous cyst scrotum" noted on the histopathology requisition form with all the clinical details was received in our lab. The patient, 48 year old male, presented to the clinician with complaint of nodule on the left scrotum since 8 years. Once the swelling was noticed by patient, it remained almost constant in size and painless over a period of time. Recently swelling was associated with mild discomfort. There was no history of fever or trauma or any other significant history.

As per clinical records, the swelling was firm, non tender, approx. 2×1.5×0.8 cm<sup>3</sup>, over posterior aspect of left scrotum with slightly restricted mobility and normal appearing overlying skin, without any palpable connection with testis, epididymis or spermatic cord. No inguinal lymph nodes were palpable. Hernial orifices were free. The swelling was provisionally diagnosed as sebaceous cyst, excised and sent for histopathological examination.

Grossly, the specimen was a partially skin covered, well circumscribed, firm nodule measuring 1.5×1×0.5 cm<sup>3</sup>, which on cut surface was solid, homogenous, white with whorling. No cystic change, necrosis or haemorrhage was noted. H&E stained sections showed a well circumscribed tumour composed of interlacing and whorling bundles of spindle shaped cells having moderate amount of eosinophilic cytoplasm and blunt ended oval nuclei, well delineated from overlying skin. No cytological atypia or mitotic figures were seen. (Figure 1 & 2) Histopathological diagnosis of scrotal leiomyoma was made.



**Figure 1 showing normal scrotal skin with underlying well circumscribed (H&E, 40X)**



**Figure 2 showing interlacing bundles of spindle shaped cells with blunt ended oval nuclei and moderate amount of eosinophilic cytoplasm (H&E, 400X)**

### Discussion

Both benign and malignant tumours of the scrotum are rare. A variety of mesenchymal neoplasms may arise on the tunica dartos<sup>6</sup>, leiomyoma being the most common<sup>7</sup>. Smooth muscle tumours of scrotum were first described by Forsters in 1858 and are reported to be extremely rare.<sup>8</sup> Scrotal leiomyomas occurs most often in white men between 4<sup>th</sup> and 6<sup>th</sup> decades of life. Patients usually present with painless solitary small cutaneous lesion measuring 1-14 cm with the average of 6.4 cm.<sup>7</sup> The painless nature of scrotal leiomyoma corresponds well with its slow growing nature pushing the nerve trunk outward rather than compressing it.<sup>9</sup> Because of the asymptomatic, painless and slow growing nature of the tumour, patients usually present late with an average of 7.6 years between the patient's recognition of the tumour and its surgical removal.<sup>4</sup>

In present case, the patient came to surgeon 8 years after initial presentation because of recent onset of discomfort. Scrotal leiomyomas are painless as described in most studies including our case but Preukasarianond S et al<sup>10</sup> reported a painful scrotal leiomyoma.

Scrotal smooth muscle tumours are graded as benign, atypical or malignant based on four pathological figures, viz, 1) size  $\geq 5$  cm in greatest diameter, 2) infiltrating margins, 3)  $\geq 5$  mitotic figures per 10 HPFs, and 4) moderate cytological atypia. Tumours with any one of the criteria are benign, those with any 2 are considered atypical and those fulfilling<sup>3-4</sup> of the criteria are diagnosed as leiomyosarcomas.<sup>11</sup> In our case, the tumour was 1.5 cm in greatest dimension, well circumscribed with no cytological atypia and no mitotic figures. Hence it was diagnosed as benign leiomyoma.

Benign and atypical leiomyomas are similar in their behaviours and are managed by excision, whereas leiomyosarcomas need aggressive management. However, atypical leiomyomas need long term follow-up.<sup>5</sup> Hence it is very essential for a pathologist to look for criteria of malignancy, especially mitotic figures, as mentioned by Newman and Fletcher who considered the presence of any mitotic activity as a criterion of malignant potential.<sup>7</sup>

We emphasise that, despite being rare, leiomyoma should be in the differential diagnosis in any scrotal swelling.

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