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Leiomyoma of scrotum: A case report of a common benign tumor at a rare site

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Abstract

Introduction: Leiomyoma is a benign tumor of smooth muscles that can arise almost anywhere in the body, where smooth muscle is present. Leiomyoma of the scrotum is a rare entity described as a benign pathology arising from subcutaneous tissue or dartos muscle.

Case history: Here, we report a case of solitary scrotal leiomyoma presenting with lump on medial aspect of left side of scrotum since 6 months. This case has been reported for its rarity as presented with very short history till the date in literature.

Conclusion: Leiomyoma of the scrotum is a rare benign mesenchymal neoplasm. This case points to importance of the clinicopathological characteristics of the scrotal smooth muscle tumors in elderly patient, with skin ulceration & in shorter duration to prevent erroneous diagnosis & treatment.

Keywords: Immunohistochemistry, leiomyoma, scrotum

Introduction

Leiomyoma is a benign tumor of smooth muscles that can arise almost anywhere in the body [1, 2]. Leiomyoma of the scrotum is a rare entity arising from subcutaneous tissue or dartos muscle [3]. Smooth muscle tumors of scrotum were first described by Forsters in 1858 and reported to be extremely rare [4]. Siegel and Graffey demonstrated the rarity of this tumor finding only 11 cases in a review of 11000 cases of scrotal tumor [3]. Cutaneous Leiomyoma accounts for approximately 5 % of all leiomyomas and genital leiomyomas, such as scrotal Leiomyoma, have an even lower incidence rate [1].

We report a case of solitary scrotal Leiomyoma, a rare case.

Case History

A 71 years old male presented with complaints of a painless lump on left side of the scrotum since 6 months. On physical examination, a single, well defined, soft to firm, mobile, nontender lump 1 x 1 cm on medial aspect of left scrotum. The overlying skin was ulcerated. It could be felt separate from testes or the adnexal structures. Both testes were normal without any palpable inguinal lymph node. Lump was excised and sent for histopathological evaluation.

On gross examination:

Single skin covered soft tissue bit measuring 1.2 x 0.8 x 0.6 cm. External surface shows skin ulceration. C/s was grey/ white, soft to firm. Section was given and formalin fixed embedded block prepared from it.



Fig 1: Photograph showing scrotal lump, external surface shows ulcerated skin.

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On microscopic findings

Haematoxylin & eosin stained section showed skin with ulceration and inflammation. Benign tumor composed of spindle shaped cells having blunt ended elongated nuclei and eosinophilic cytoplasm arranged in interlacing and whirling pattern noted beneath the skin. Mitosis and nuclear pleomorphism were absent.

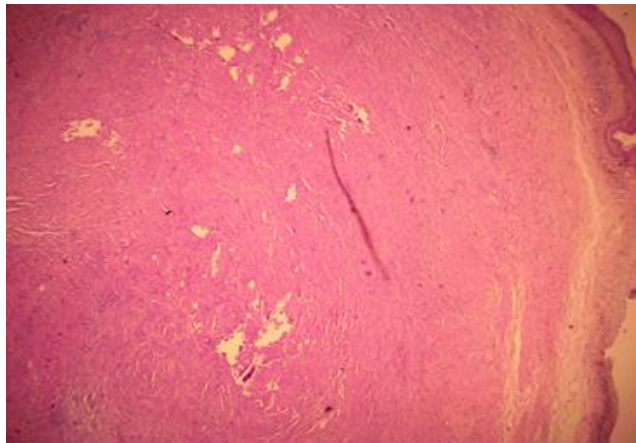


Fig 2: Micrograph showing skin with ulceration & benign tumor composed of interlacing bundles of smooth muscle cells beneath.

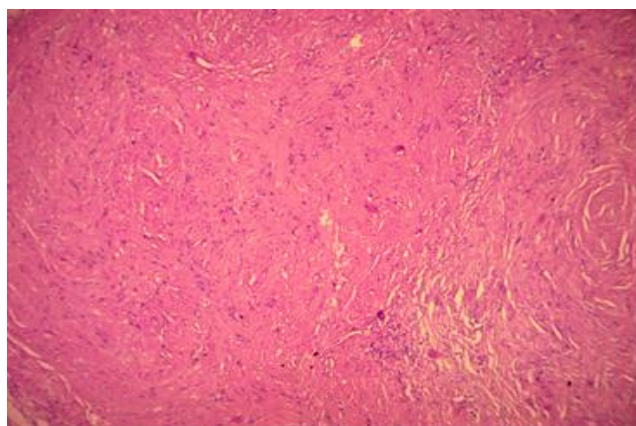


Fig 3: Micrograph showing benign tumor composed of spindle shaped cells having blunt ended elongated nuclei and eosinophilic cytoplasm arranged in interlacing and whirling pattern. Mitosis and nuclear pleomorphism were absent.

Immunohistochemistry

Immunostaining for smooth muscle actin (SMA), h-caldesmon & desmin were done on paraffin embedded section. The smooth muscle tumor showed SMA, h-caldesmon & desmin positivity on Immunohistochemistry. On the basis of histopathological and IHC profile a diagnosis of scrotal Leiomyoma was made.

Discussion

Leiomyomas may originate from any anatomic location of smooth muscle in genitourinary system [4]. Superficial Leiomyoma of skin and subcutaneous tissue can be of three types : (a) tumor of arrector pili muscles (piloleiomyoma), (b) tumors of smooth muscles of blood vessels (angioliomyoma) and (c) genital Leiomyoma (from smooth muscles of nipple, vulva and scrotum).[1] Isolated cases of leiomyomas have been reported arising from the renal pelvis, bladder, spermatic cord and epididymis, prostate as

well as the glans penis [1, 3-5]. Scrotal wall leiomyomas are rare, usually asymptomatic tunica dartos tumors, commonly seen in middle aged Caucasian men [3]. Patients usually present with painless solitary small cutaneous lesion measuring 1-14 cm with average of 6.4 cm [6]. Due to their painless and slow growing nature, the patients usually present late with an average of 7.6 years between the patients recognition of the tumor and its surgical removal [3]. The painless nature of scrotal Leiomyoma corresponds well with the slow growing nature of the tumor pushing the nerve outward rather than compressing it [2]. A case of scrotal lump presenting after 10 months of recognition has been reported by Sherwani *et al* [2]. A case of pedunculated scrotal Leiomyoma presenting after 20 years of lump recognition has been reported by Chang *et al* [7]. In our case, the patient presented within 6 months of lump recognition. The clinical manifestations of scrotal Leiomyoma may not be characteristics of the disease, clinically the differential diagnosis includes a sebaceous cyst, fibroma and if painful, Schwannoma. In cases of ulcerative lesions, the scrotal squamous carcinoma should be included in the differential diagnosis [7]. The presence of mitotic activity was advocated as important criteria of potential malignancy. Thus, it is important for the pathologist to look them carefully [6].

Simple surgical excision is curative, surgery for large lesions should be conservative if its cutaneous origin is clearly separate from the testis or adnexal structures. Radiation should be avoided for treating leiomyomas as it may induce a malignant transformation [2].

Follow up is required and its recurrence is there a thorough investigation should be carried out to rule out any possibility of malignancy.

Conclusion

Leiomyoma of the scrotum is a rare benign mesenchymal neoplasm, most often presenting as a painless lump. This case points to importance of the clinicopathological characteristics of the scrotal smooth muscle tumors in elderly patient, with skin ulceration & in shorter duration to prevent erroneous diagnosis & treatment.

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