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RESEARCH ARTICLE

Leiomyoma of scrotum, a case report of rare testicular tumour and review of literature

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Abstract

Leiomyoma is a benign tumour of smooth muscles. Most common site involved is uterus, but it is also seen in the renal pelvis, bladder, spermatic cord, epididymis, prostate and scrotum. Leiomyomas originating from the scrotum are extremely rare. We report a case of 60 year old man presented with right side scrotal swelling. On physical examination, a swelling measuring 4X4 cms palapable separately from the testis was revealed. Ultrasound also showed an echogenic and cystic tumour measuring 4X4 cms with normal testis. Excision of the tumour was done and subjected to histopathology which showed findings consistent with Leiomyoma. The diagnosis of solitary leiomyoma of scrotum was given which was confirmed by immunohistochemistry.

INTRODUCTION

Leiomyomas are benign tumours originating from the smooth muscles and are most commonly found in uterus.[1] Other less commonly involved sites are renal pelvis, bladder, spermatic cord, epididymis, prostate and scrotum.[2] Scrotal Leimyomas are categorized under superficial leiomyomas of skin and subcutaneous tissue which are further of three types a) tumour of arrector pili muscle (piloleiomyoma) b) tumors of smooth muscles of blood vessels(angioleimyoma) and c) genital leimyoma(from the smooth muscles of nipple, vulva and scrotum).[3] Leiomyomas of the scrotum are extremely rare with less than 20 cases reported in the literature so far.[4] Here we present a rare case of leiomyoma of the scrotum. It is noteworthy that leiomyomas should be kept in differential diagnosis of scrotal swelling.

Case History

A 60 year male presented with a slowly enlarging painless mass in the right scrotal region for the last two years. Physical examination revealed a firm and mobile mass measuring 4X4 cms which was not attached to the underlying testis and overlying skin. Testis on this side felt separately and was unremarkable. No inguinal lymphadenopathy was evident. Ultrasound also showed an echogenic and cystic tumour measuring 4X4 cms with normal testis. Excision of the tumour was done and the tumour could be easily mobilized from the surrounding structures per operatively. The tumour was sent to pathology department for histopathological evaluation. Grossly it was well

circumscribed grey/white firm mass measuring 4X4X2 cms. Cut surface was solid homogenous with whorling and interspersed cystic areas. (Fig- 1A,B)

Microscopically, the tumour was composed of interlacing and whorling bundles of smooth muscles cells with areas of hyalinization. Individual cells were uniform in size and shape with oval to spindled nuclei with bipolar cytoplasm.(Fig-1C,D) No cytological atypia or mitotic figures were evident. The diagnosis of Leiomyoma- Scrotum was made. On immunohistochemistry tumour cells were strongly immunoreactive for smooth muscle actin, h-caldesmon and desmin.(Fig-2A,B,C,D)

These findings were consistent with the histopathological diagnosis of Leiomyoma.

Discussion

Leiomyomas are benign tumours of smooth muscles which can arise in any part of the body, uterine leiomyomas being the commonest.[1] Cutaneous leiomyomas account for approximately 5 % of all leimyomas.[5] They include cutaneous(Pilar) leiomyomas, vascular leiomyomas (angioleiomyoma) and genital leimyomas.

Genital leiomyoma include those arising from scrotum, nipple and vulva.[6] Scrotal leimyomas arise from dartos muscle and are even rarer with a very low incidence rate with <20 cases reported so far in the literature.[4] In another study conducted in a review of 11,000 cases of scrotal tumour, only 11 cases were of leiomyoma srotum demonstrating the rarity of the tumour.[7] It commonly occurs in white males aged 40-60 yrs, presenting as a painless slow growing solitary tumour. The size varies from 01-14 cms with an average size of 6.5 cm.[6]

Scrotal Leiomyomas are mostly benign in nature but the evidence of any mitotic activity should be carefully looked for. As mitotic activity is advocated as an important criterion for diagnosing any malignant potential of the tumour.[8] The various clinical differentials include dermatofibroma, schwannoma, neurofibroma, adenexal tumour and metastasis.[9]

Most leiomyomas are benign so complete surgical excision is curative requiring no radiotherapy.[9]

Conclusion

We present this rare case of scrotal leiomyoma highlighting its diagnostic and treatment aspects. This case emphasizes that leimyomas should be considered in the differential diagnosis of the srotal tumours.

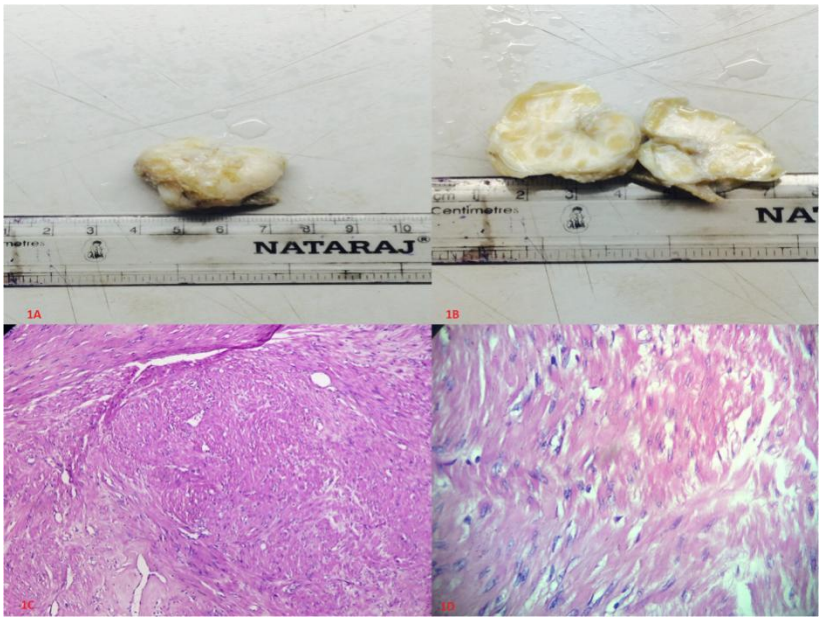

Fig 1 (A,B): Well circumscribed grey/white firm mass measuring 4X4X2 cms. Cut surface: solid homogenous with whorling and interspersed cystic areas.

Fig 1 (C): Scanner view showing Interlacing and whorling bundles of smooth muscles cells. (H&E, 40X)

Fig 1 (D): High power view showing individual cells of uniform size and shape with oval to spindled nuclei with bipolar cytoplasm. No cytological atypia or mitotic figures evident. (H&E, 400X)

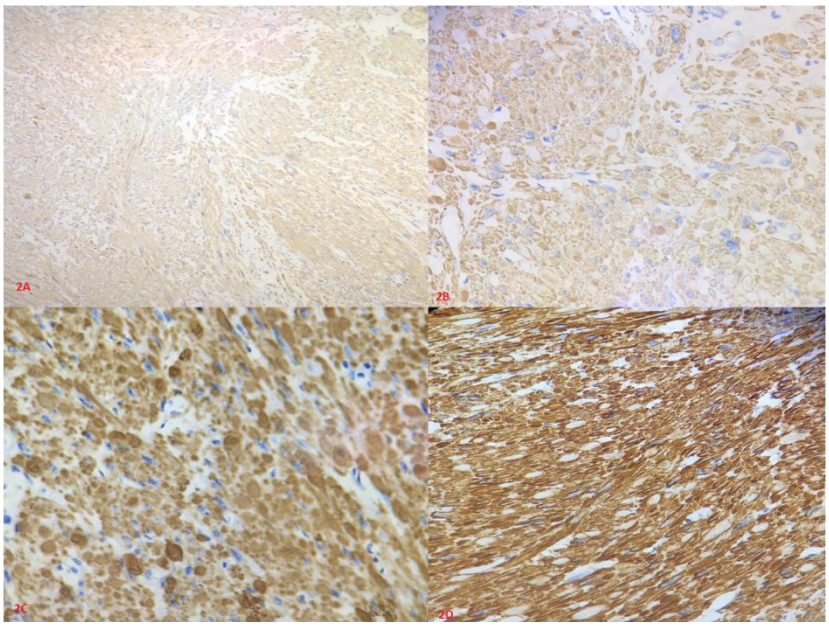

Fig 2 (A,B): Scanner view and High power showing tumour cells were strongly immunoreactive for smooth muscle actin. (IHC, 40X&400X)
(C,D) High power showing tumour cells strong positivity for h-caldesmon and desmin(400X)

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