International Journal of Science and Research (IJSR)
ISSN (Online): 2319-7064
Index Copernicus Value (2015): 78.96 | Impact Factor (2015): 6.391

Paratesticular Leiomyoma - A Rare Case Report

Dr. Sujata Giriyan[1], Dr. Kanchana R.H[2], Dr. Veena Paragannavar[3]

[1]Professor and HOD, Department of Pathology, Karnataka Institute of Medical Sciences, Hubballi, Karnataka

[2]Tutor, Department of Pathology, Karnataka Institute of Medical Sciences, Hubballi, Karnataka

[3]Post Graduate, Department of Pathology, Karnataka Institute of Medical Sciences, Hubballi, Karnataka

Abstract: ***Leiomyoma of the urinary and male genital tract is extremely rare. It is a benign soft tissue tumor that can arise from almost any site within the genitourinary tract containing smooth muscles. The most common localization is the renal capsule, followed by the bladder wall, epididymis, spermatic cord and tunica albuginea. A 52 year old male presented with chief complaint of right scrotal swelling and on MRI, the diagnosis of intrascrotal extratesticular mass possibily fibroma or adenomatoid tumor was offered. High orchidectomy was performed and histopathological diagnosis of paratesticular leiomyoma was given. Here we report the clinical, radiological, histopathological and histochemical features of paratesticular leiomyoma.***

Keywords: Paratesticular, Leiomyoma, Tumor, benign, swelling

1. Introduction

The paratesticular region consists of the spermatic cord, epididymis, vestigial remnants, and tunica vaginalis. The vast majority of paratesticular lesions are benign cystic lesions of the epididymis (cysts, spermatoceles), scrotal fluid collections (hydroceles, pyoceles), inflammatory lesions (acute and chronic epididymitis), or hernias [(1)]. Primary paratesticular tumors are rare, only accounting for 7% to 10% of all intra scrotal tumors. In adults, more than 75% of these lesions arise from the spermatic cord [(2)].

Primary solid neoplasms of the paratesticular tissues are clinically significant and affect patients of all ages. Most patients are asymptomatic, presenting with a slow-growing, nontender mass. Not infrequently, patients complain of a rapidly enlarging nontender mass. Lipoma is the most common primary benign paratesticular neoplasm and the most common tumor of the spermatic cord. Adenomatoid tumor is the most common tumor of the epididymis, followed by leiomyoma. In adult patients, it is imperative to consider sarcomas in the differential diagnosis of all solid tumors of the scrotum[(1)].

Other benign tumors include fibroma, hemangioma, neurofibroma, and papillary cystadenoma. Malignant tumors include liposarcoma, rhabdomyosarcoma, lymphoma, fibrosarcoma, and rarer tumors such as pleomorphic hyalinizing angiectatic tumor, malignant schwannoma, and malignant fibrous histiocytoma[(1)].

2. Case Report

A 52 year old male presented with chief complaint of a right scrotal swelling which had been gradually increasing in size during the past 9 years. Initially, the swelling was small in size measuring 0.5x 0.5 cm which then progressed to attain the present size of 10x8cm. There was no history of pain, trauma and fever. General physical examination was within normal limits.

On local examination swelling of size 10x8 cm was present extending from right scrotal root to bottom of the scrotum. On palpation it was firm in consistency.

Beta HCG, LDH and AFP values were within normal limits.

On USG diagnosis of granulomatous lesion was given.

On MRI, heterogenously enhancing intrascrotal extratesticular mass measuring 8.1x 6.9cm was noted which was separately visualised from the testis and epididymis and the diagnosis of intrascrotal extratesticular mass possibily fibroma or adenomatoid tumor was given (figure1).

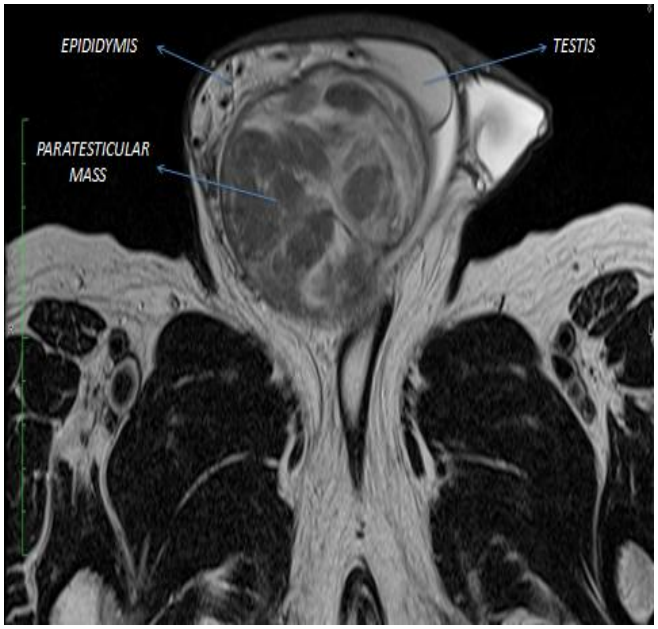

Figure 1: MRI of scrotum (axial view) showing paratesticular mass

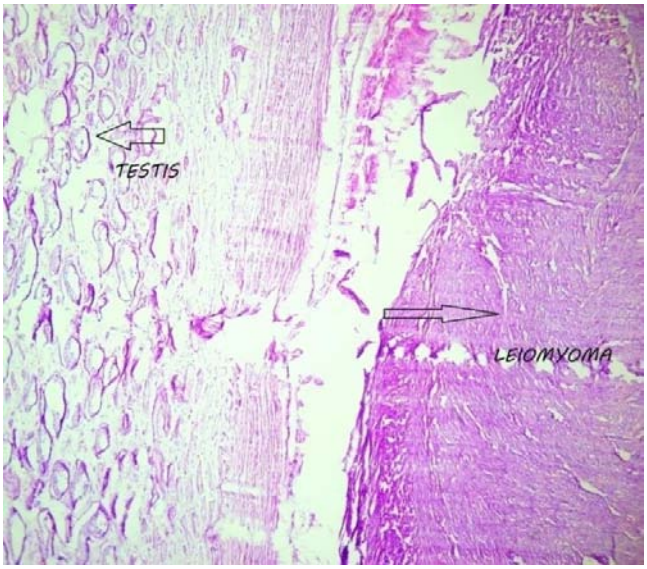

Figure 2: Leiomyoma separated from the normal testicular tissue by a well defined capsule.(H and E, 10X10)

High orchidectomy was performed and specimen was sent for histopathological examination. On gross examination specimen consisted of testis, epididymis, spermatic cord along with a growth in the paratesticular area. The growth was well encapsulated, firm, grey white, measuring 8x7x4 cms. Cut surface of the growth showed grey white whorled areas. Testis appeared normal and was compressed by the growth.

Microscopic examination shows a spindle cell tumor which is separated from the normal testicular tissue by a well defined capsule(figure 2).These spindled cells are arranged in interlacing fascicles and have bland oval nucleus with biphasic cytoplasm (figure 3A and 3B).Special stains like Von Gieson(figure 4) and Massons trichrome showed smooth muscle differentiation. Hence, histopathological diagnosis of paratesticular leiomyoma was offered.

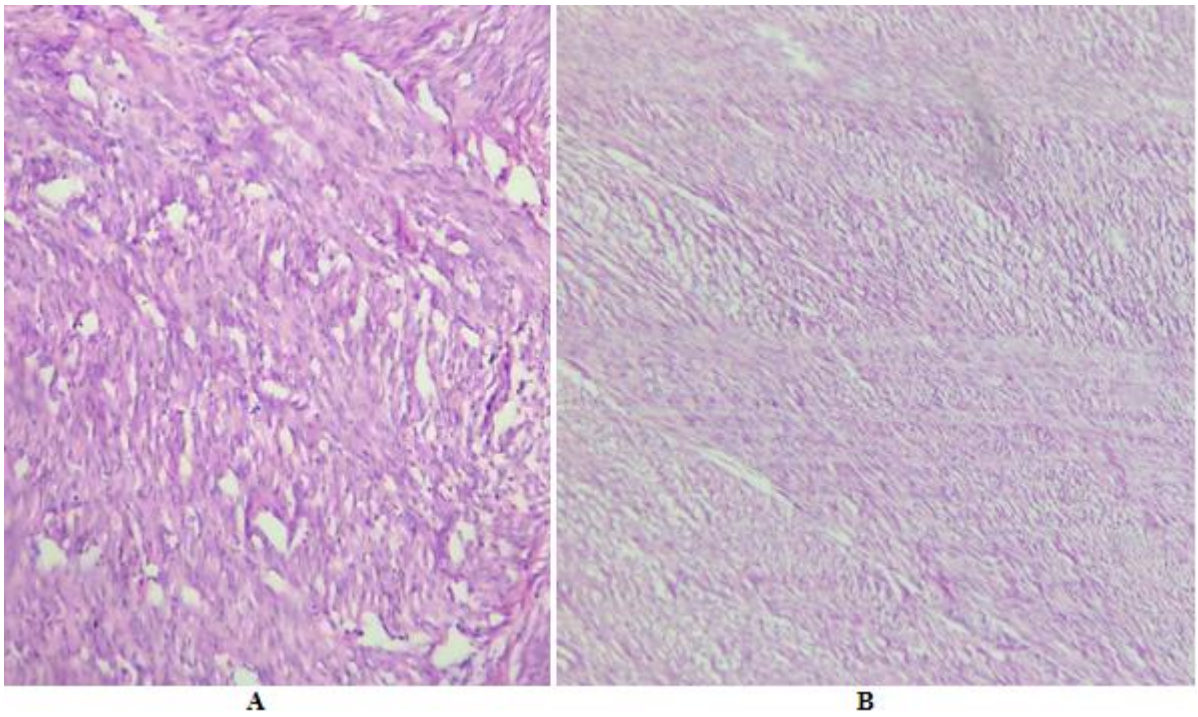

Figure 3: A. Paratesticular tumor composed of interlacing fascicles of smooth muscle fibres (H and E, 10X10) B. The same area under higher magnification.(H and E, 40X10)

Figure 4: Von Giesons stain Smooth muscle fibres stained yellow and nuclei stained black

3. Discussion

Leiomyomas are benign often bulky tumours that are derived embryologically from mesenchymal cells [(3)]. Leiomyoma of the urinary and male genital tract is extremely rare. It is a benign soft tissue tumor that can arise from almost any site within the genitourinary tract containing smooth muscles. The most common localization is the renal capsule, followed by the bladder wall, epididymis, spermatic cord and tunica albuginea. Most of them are unilateral, nevertheless some cases of bilateral tumors have been described[(4)].Superficial smooth muscle tumours may arise from the tunica dartos, the scrotal superficial, subcutaneous smooth muscle zone[(5)].

Although they are slowly growing tumors which tend to occur in adults, patients with young age have been reported. These rare benign intrascrotal tumors may lead to orchidectomies because of suspicion of testicular malignity[6].

Radiologic evaluation begins with conventional and color Doppler Ultrasound, but Ultrasound findings may not allow definitive characterization. Computed tomography (CT) aids in characterization of the morphology and staging. The wide field of view, high-contrast spatial resolution, and multiplanar imaging capability of magnetic resonance (MR) imaging allow precise demonstration and localization of a mass, including its anatomic relationship to the surrounding structures[1].

Leiomyomas are usually well circumscribed and surrounded by a grey-white fibrous capsule. The cut surface bulges and exhibits a whorled pattern. At microscopic analysis, the tumor is seen to consist of smooth muscle spindle cells arranged in interlacing bundles with varying admixtures of fibrous, often hyalinized connective tissue[1].

The differential diagnosis of leiomyomas includes fibromas, adenomatoid tumor, cystadenomas, neurofibromatosis and specific inflammations [4].

4. Conclusion

When patient presents with any scrotal mass, a diagnostic and therapeutic problem arises from the concern over a possible malignancy. Therefore any scrotal mass must be appropriately evaluated for the possibility of malignancy-keeping in mind, however, that extra testicular masses are typically secondary to trauma, infection and inflammation or benign neoplasms [3].Since its radiologically difficult to differentiate leiomyoma from fibroma and other benign lesions,histopathological and histochemical examination will provide the definitive diagnosis.

References

[1] Akbar et al.Multimodality Imaging of Paratesticular Neoplasms and Their Rare Mimics. RadioGraphics 2003; 23:1461–1476.
[2] Galosi et al.Adult primary paratesticular mesenchymal tumors with emphasis on a case presentation and discussion of spermatic cord leiomyosarcoma. Diagnostic Pathology 2014, 9:90.
[3] Deshpande R. H, Paithankar K. B. Leiomyoma of Epididymis: A Case Report.IJPBS 2012; Vol 2(2):21-24.
[4] Ortega-hrepich C., Vanderlinden E., Bourgain C, Devroey P, Tournaye H.Paratesticular leiomyoma in an azoospermic patient and successful testicular sperm extraction (TESE) for intracyto - plasmic sperm injection (ICSI) with an ongoing pregnancy. FVV in ObGyn, 2012, 4 (3): 213-215.
[5] Eble JN, Sauter Guido, Epstein J, Sesterhenn I. Tumors of the testis and paratesticular tissue. In: The WHO Classification of Tumours 2002: 274.
[6] Arpali E. and Tok A.A Patient Presenting with Concurrent Testis Torsion and Epididymal Leiomyoma. Case Reports in Urology Vol 2013.