



A RARE TESTICULAR SPINDLE CELL TUMOR: FIBROMA OF GONADAL STROMAL ORIGIN

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Article Info	ABSTRACT
<p>Received 04/08/2015 Revised 07/09/2015 Accepted 14/09/2015</p> <p>Key words: Spindle cell lesion, Benign tumor, Intratesticular, fibroma.</p>	<p>Benign intrascrotal spindle cell tumors are rare lesions and most of them are located in paratesticular region. Intratesticular fibroma of gonadal stromal origin is a rare benign tumor of testis which usually presents as a slow growing testicular mass. Here we report a case of 29-year-old male presented with a 3.0 cm, painless, slow growing right testicular mass. Physical examination and ultrasonography revealed a right testicular solid mass. Right high inguinal orchidectomy was performed. Histopathological examination showed a well-circumscribed, solid, spindle cell lesion in testicular parenchyma. Immunohistochemical myogenin, CD34, inhibin were negative, vimentin was diffuse, S100 was focal positive in tumor cells. So, final diagnosis was made as “testicular fibroma of gonadal stromal origin”. Until today, approximately only 25 cases have been reported in the literature.</p>

INTRODUCTION

Benign intratesticular spindle cell lesions are rare [1]. Testicular fibroma of gonadal stromal origin is a rare benign tumor of testis which usually presents as a slow growing testicular mass [1-3]. Testicular fibromas of gonadal stromal origin are considered analogous to cellular fibromas of the ovary [4]. Benign intrascrotal fibrous lesions are rare, with most arising in the paratesticular region. Intratesticular fibrous tumors are even more uncommon. About only 25 cases of testicular fibroma have been reported in the current literature. Here we report another case of testicular fibroma of gonadal stromal origin.

CASE PRESENTATION

A 29-year-old male presented with a 3.0 cm, painless, slow growing right testicular mass during a two months period. On physical examination, enlarged firm right testis was detected. The ultrasonography revealed a 31x21 mm lobulated exophytic solid mass in the right testis. The left testis and epididymis were unremarkable. The testicular tumor markers, α -fetoprotein and β -human

chorionic gonadotropin levels were normal. The patient underwent right high inguinal orchidectomy and the specimen was sent for histopathological examination. The post-operative period was uneventful.

The pathological diagnosis was testicular fibroma. Macroscopically, the mass was located in testicular parenchyma and well circumscribed with a tan-white, smooth, firm and some gelatinous appearance on cut surface. Microscopic examination showed the tumor to be a well-circumscribed spindle cell neoplasm with thick fibrous capsule (Figure 1). Tumor have hypercellular and hypocellular areas (Figure 2) in collagenous stroma with prominent vascular network. Tumor composed of spindle to oval and stellate cells (Figure 3) which formed in fascicles and storiform areas. Cytological atypia and mitosis are seen minimally. Atypical mitosis, necrosis, brisk mitotic activity and pleomorphism were not detected. Immunohistochemically, myogenin, CD34, inhibin were negative, vimentin was diffuse, S100 was focal positive in tumor cells. The patient had no evidence of recurrence or metastasis 6 months postoperatively.



Fig 1. Thick fibrous capsule which separates the tumoral lesion from adjacent testicular parenchyma. (H&E, x50)

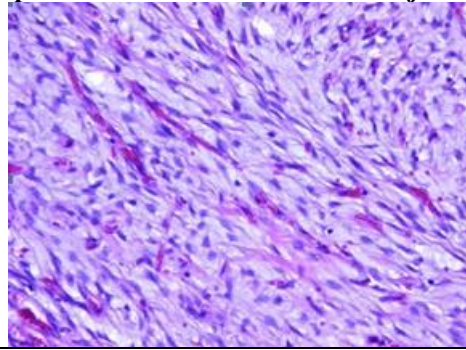


Fig 2. Tumor composed of compact hypercellular (a) and hypocellular (b) areas in collagenous background. (H&E, x100)

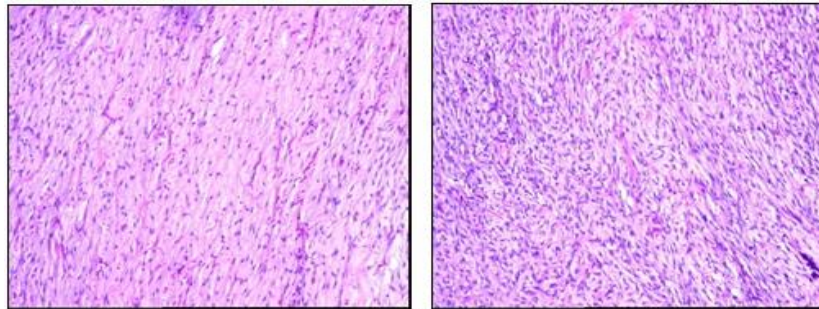
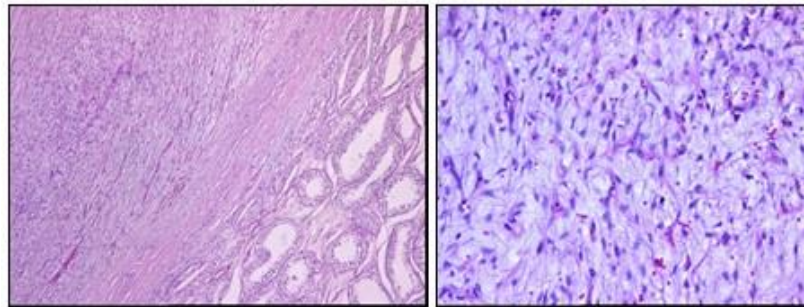


Fig 3. Tumor composed of spindle to oval (a) and stellate (b) cells which formed in fascicles and storiform areas. Cytological atypia and mitosis are seen minimally. (H&E, x200)



DISCUSSION AND CONCLUSION

Sex cord stromal tumors comprise less than %5 of all testicular tumors. According to the recent World Health Organisation Classification testicular fibromas are considered as sex cord/gonadal stromal tumors and classified under the tumors of thecoma/fibroma group [5].

Testicular fibromas are a rare group of benign testicular neoplasms. The tumor presents as a slow growing, sometimes painful mass that is not associated with hormonal alteration. Jabbour *et al* [4] have compiled recent studies, so they declared that testicular fibromas are reported in men with an average age of 39 ± 4.2 years (range 16-67 years) and average tumor size is 2.7 cm (range 0.8 to 7.0 cm). Knowledge of this rare tumor is important as its histological features are insufficient to render a diagnosis of sarcoma. Testicular fibromas are composed of a pure fibrous component or admixed with a sex-cord stromal component. To reveal the sex-cord stromal component, immunohistochemical analysis of inhibin positivity in

these areas may be helpful. Greco *et al* [6] reported that the origin of tumor cells is intertubular mesenchymal cells and they also pointed out the presence of myofibrils.

Differential diagnosis of testicular spindle cell lesions is important to predict the prognosis of the disease and to determine the treatment. The histological features of testicular fibroma are insufficient to consider a diagnosis of sarcoma. Increased cellularity and occasional mitosis can be seen but there is no significant pleomorphism, mitosis, atypia and infiltrative borders as in sarcoma. And also fibromas must be distinguished from other spindle cell lesions such as tumors with muscle origin. Intratesticular leiomyomas are rare lesions which are composed of bands and fascicles of uniform spindle cells and usually located at spermatic cord [7]. Immunohistochemical positivity of smooth muscle actin and desmin [8], negativity of inhibin in leiomyomas may be helpful in differential diagnosis. Another distinction entity is solitary fibrous tumor (SFT) of testis. SFTs are composed of spindle to oval cells in

benign nature and also they have typical branching vascular network referred to as “staghorn” and immunohistochemical CD34 positivity. Conversely, fibromas are negative for CD34 and they don't have staghorn vascular pattern.

Treatment of testicular fibromas is generally surgical excision with little evidence of recurrence or metastasis.

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CONFLICTS OF INTEREST:

On behalf of all authors, the corresponding author states that there is no conflict of interest.

STATEMENT OF HUMAN AND ANIMAL RIGHTS:

All procedures performed in human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. This article does not contain any studies with animals performed by any of the authors.

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