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Paratesticular Adenomatoid Tumor – A Case Report

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***Abstract**: Adenomatoid tumor is a rare benign tumor of the paratesticular tissues of mesothelial origin which most commonly involves epididymis in males and also found in the female genital tract. On presentation in males, as a scrotal swelling it is difficult to differentiate it from other testicular neoplasms clinically. Hence histopathological examination and IHC studies are important for diagnostic confirmation. Because of its rarity we discuss the clinical and histopathological aspects. Herein we report a case of 45 years male, who presented with 1 year history of scrotal swelling. A clinical diagnosis of testicular neoplasm was suggested. Surgical excision was performed and the histopathological examination was consistent with Adenomatoid tumor and confirmed by IHC studies.*

***Keywords**: Adenomatoid tumor, Epididymis, Histopathological, IHC.*

I. Introduction

Paratesticular neoplasms are rare and account for less than 10% of all intrascrotal tumors and most of them are benign in nature [1]. Most common sites are the male genital tract (epididymis) and the female genital tract. Ultrasound combined with histopathological examination and IHC is diagnostic. Surgical excision procedure is required to rule out malignancy such as malignant mesothelioma, carcinoma rete testis and paratesticular yolk sac tumor. Ultrastructural and IHC studies suggest their mesothelial origin.

II. Case Report

A 45 years old male patient presented with painless swelling in right scrotum since one year. There was no history of trauma. Clinical examination revealed a solitary swelling located in right scrotum at lower pole of testis measuring 3x2 cm, solid in consistency with mild tenderness and distinct from the testis. Scrotal skin, spermatic cord and left testis were unremarkable. USG performed with Esoate my lab 40 revealed a 3x2.5 cm single, well circumscribed mass, smooth, round, hyperechoic at lower pole of epididymis, separate from right testis.

Gross: Surgical excision was performed and specimen sent for HPE revealed right orchidectomy specimen and testis measuring 2.5x2cm. A single, well circumscribed round to oval, grey-white firm nodular mass at lower pole of epididymis measuring 3x2 cm. Cut section was firm, grey-white and homogenous in appearance.

Microscopic Examination: Sections from mass revealed an unencapsulated lesion, tumor cells were cuboidal to flattened forming round to oval slit like tubules, irregular small cysts, cords and clusters. Cells have round to oval nuclei, dense cytoplasm with large vacuolations, foci of lymphocytes and hyalinized fibromuscular stroma was present. A histological diagnosis of Adenomatoid tumor of epididymis was suggested and confirmed by Immunohistochemistry which was positive for Calretinin and Pan-CK markers.

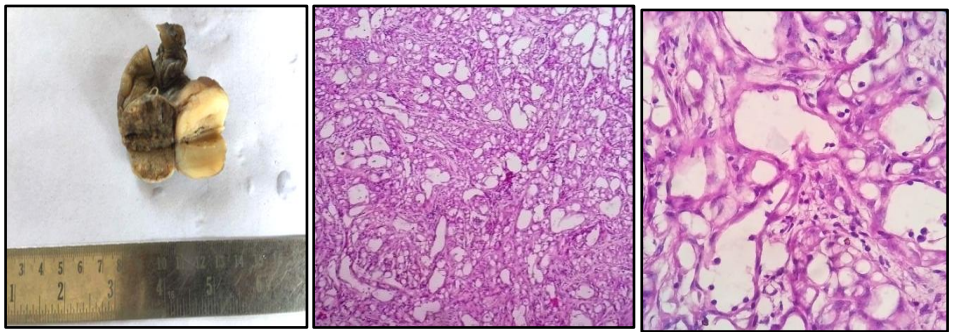

Fig 1: Cut section of tumor showing firm, white cut surface **Fig 2&3:** Tumor cells arranged in tubules, cysts and cords lined by cuboidal to flattened cells with vacuolated cytoplasm

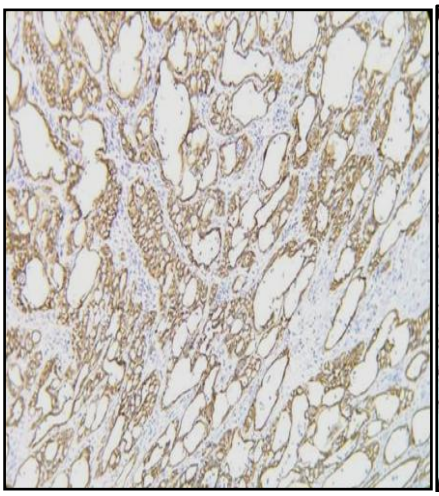

Fig 4: IHC strong positive for Cytokeratin

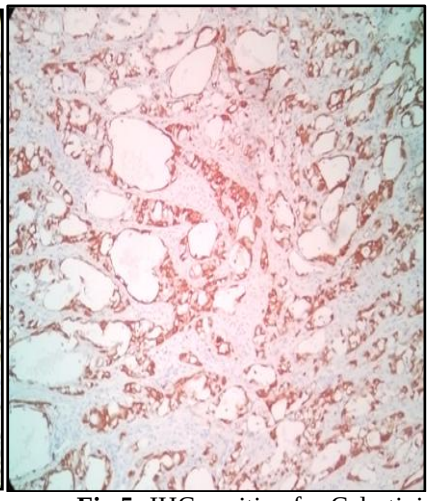

Fig 5: IHC positive for Calretinin

III. Discussion

Adenomatoid tumor also known as benign mesothelioma, is a tumor of mesothelial cells characterized by numerous gland like spaces, tubules and cords [2]. Various neoplasms originate from mesenchymal elements of the paratesticular tissues. In literature various theories suggest origin of Adenomatoid tumor of epididymis such as mesonephric, vascular endothelium, mullerian tubules and mesothelial origin [3].Mesothelial origin of Adenomatoid tumor of epididymis was proposed by Masson et al [4], currently ultrastructurally and IHC studies support their mesothelial origin [2]. Ependidymal tumors are very rare, contributing less than 5% of all intrascrotal tumors. Adenomatoid tumor of epididymis is the most common tumor of paratestis representing 32% of all tumors and 60% of all benign tumors [2]. Adenomatoid tumor involves mostly upper or lower pole of epididymis, but other sites of male genital tract are also involve such as testis, spermatic cord, tunica albuginea [2]. In female's fallopian tubes, ovaries and uterus are involved and rarely does it affect adrenals, lymph nodes, pancreas, mediastinum and pleura [5]. Mean age at presentation is third to fifth decade, but children and geriatric age group may also be affected. They present as a small, solid, intrascrotal tumors and are usually asymptomatic [6]. Adenomatoid tumor is a smooth, round, well circumscribed mass arising in epididymis. Typically they are hyperechoic and homogenous. The most important point is to clearly identify the mass as extra testicular and if shown to be arising from the epididymis, Adenomatoid tumor is the most likely diagnosis [2].Majority of tumors are less than 2-5cm and is typically a single, grey-white, well demarcated firm nodule. Tumor is composed of epithelial like cells arranged in network of tubules (round, oval or slit like), numerous irregular cysts, cords and clusters. The fibrous stroma may be hyalinized and may contain smooth muscle [7]. Tubules are lined by flat to cuboidal cells with round to oval nuclei and abundant cytoplasm with characteristic intracytoplasmic vacuoles. Lymphoid aggregates are also present. IHC studies reveal CK and EMA positivity in epithelial like cells and Calretinin which indicates mesothelial origin of tumor.

Differential diagnosis includes leiomyoma, papillary cystadenoma, metastatic carcinoma, carcinoma rete testis, malignant mesothelioma and paratesticular yolk sac tumor. Treatment of Adenomatoid tumor of epididymis is surgical excision with good prognosis and there are no cases of recurrence and metastasis reported in the literature [8]. Intraoperative frozen section pathological examination is a reliable gold standard to identify benign nature of tumor, with high sensitivity and specificity which can spare the patient of orchidectomy [9].

IV. Conclusion

Adenomatoid tumor of epididymis is a rare neoplasm and most common benign tumor of the paratesticular tissue which can be clinically confused with other testicular neoplasms. Accurate histopathological diagnosis and proper surgical treatment is the mainstay of management.

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