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EPIDIDYMAL ADENOMATOID TUMOR - A RARE BENIGN PARATESTICULAR NEOPLASM WITH DIAGNOSTIC DILEMMA – A CASE REPORT.

Surgery

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ABSTRACT

Paratesticular neoplasms are uncommon and are <10% of all the intrascrotal tumors and have a 70% incidence of being benign. Adenomatoid tumors account for about 30% of these paratesticular neoplasms, commonly seen in head of epididymis. Though benign, malignant variants have been described in the literature. We present a rare case of adenomatoid tumor seen in tail of epididymis with a clinical presentation and radiological similarity to the malignant paratesticular tumours presenting a diagnostic challenge. Epididymal adenomatoid tumour is with many differential diagnoses, which is clinically similar to its malignant counterparts. The radiological signs are nonspecific and do not accurately differentiate between a benign and a malignant neoplasm. Though malignancies are infrequent, intrascrotal paratesticular masses should be dealt with high degree of suspicion.

KEYWORDS

paratesticular neoplasm, adenomatoid tumor, intrascrotal tumor, benign epididymal tumor

INTRODUCTION

The anatomy of the paratesticular region is complex, it includes spermatic cord, testicular tunics, epididymis and vestigial remnants like appendices epididymis and testis(1). Paratesticular neoplasms are rare and are less than 10% of all the intrascrotal tumours(2). Though rare, these paratesticular neoplasms have a high incidence of malignancy; it is estimated that 70% of paratesticular neoplasms are benign and remaining are malignant. The exact site of origin of these paratesticular neoplasms are difficult to determine and is a matter of uncertainity, however it has been proposed that 90% 0f them arise from the spermatic cord(3). Adenomatoid tumors are paratesticular mesothelial neoplasms, accounting for about 30% of tumours of this anatomical region. Though commonly seen in the head of epididymis they can involve spermatic cord or testicular tunics(4). The clinical presentation and radiological similarity of these tumours with the malignant paratesticular tumours presents a diagnostic challenge. We present a case of adenomatoid tumor of tail of epididymis that pronounces this diagnostic difficulty.

CASE REPORT

A 63 year old male patient presented to the outpatient clinic with a history of swelling in the right hemiscrotrum since 3 months associated with pain since a week. On examination, tender mass noted in the right hemiscrotum which was difficult to differentiate from the adjoining testis. Testicular sensations were intact. Opposite testis and epididymis were clinically normal.

With the history of the mass of 3 months, Ultrasonography was done on 25/11/2014 showed enlarged tail of the right epididymis measuring about 16x15mm with heterogeneous echo texture and no increased vascularity (Figure 1). Testis was unremarkable. Possibility of malignancy could not be ruled out. Surgery was planned after taking informed consent. Patient underwent surgical exploration with Right epididymectomy on 08/12/2014 (Figure 2).

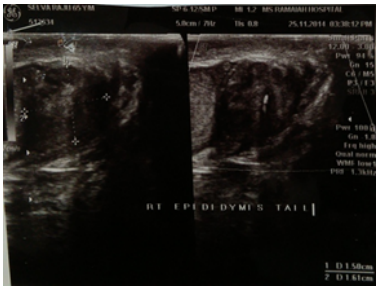

Figure 1: Scrotal ultrasonography showing enlarged right epididymis

Histopatholoical examination revealed a mass of 2x2x1cm with a peripherally placed tubular structure measuring 5mm. On microscopy, illdefined lesional tissue composed of sheets, cords and tubules separated by fibrocollagenous tissue. The tubules are lined by flattened to cuboidal epithelium. At places, the cells are polygonal with vesicularnucleus, inconspicuous nucleoli. Cords are predominantly composed of clear vacuolated cells. Peripheral stromal tissue show aggregates of spermatozoa. Histological features were compatible with adenomatoid tumor of epididymis (Figure 3).

Hence patient underwent no additional treatment postoperatively and is on close regular follow up once in three months. No recurrence is noted till date

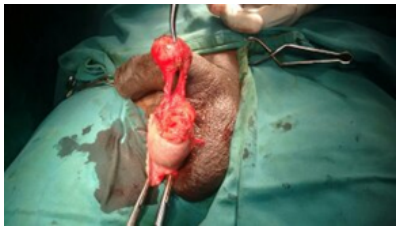

Figure 2: Intraoperative picture showing right epididymal tumor

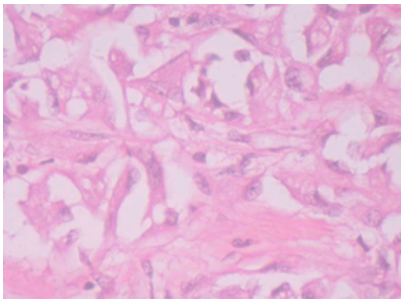

Figure 3: HPE showing cystically dilated spaces in adenomatoid areas

DISCUSSION

Epididymal tumours are rare paratesticular neoplasms with most of them being benign. Adenomatoid neoplasms are the most common histological subtype followed by leiomyoma and papillary cystadenoma(5). A spectrum of malignant neoplasms derived from mesenchymal tissues may arise from paratesticular tissues namely epididymidal carcinoma, carcinoma of rete testis, malignant mesothelioma, ovarian-type epithelial tumor and metastatic

carcinoma. Gupta et al. state that primary malignant tumors of the epididymis constitute 25% of the tumors of the paratesticular region, to constitute 3 groups: sarcomas, epithelial and dysembrionary tumors(6). Although the majority of authors consider it a benign tumor, without good documentation of cases of metastasis or recurrence after excision, there have been some descriptions of malignant forms of adenomatoid tumor(7).

Most adenomatoid tumors occur in the 4th decade of life but cases have been reported in individuals from 18 to 79 years old(8). Most of these tumours are clinically small solid lumps which are usually asymptomatic and are found accidentally by the patient or by the physician during routine clinical examination, as a non-painful scrotal mass more commonly located at the tail of the epidydimis, which generally remains unchanged in size for years(9).

High resolution Ultrasound of scrotum is the preferred imaging method. It differentiates between intra and extratesticular lesions and allows accurate diagnosis of cystic forms and solid lesions in most of the occasions, although it cannot determine the benigness of the hypo and hyperechoic lesions, even when the doppler is used. Adenomatoid tumor does not produce any characteristic patterns on ultrasound which would allow us to distinguish between an adenomatoid tumor or a malignant solid tumor(10,11).

'Adenomatoid tumor' term was given by Golden and Ash in 1945. It describes a group of benign neoplasms with a glandular pattern, with unclear histogenesis which is localized in the genitourinary tract. Adenomatoid tumor has a spectrum of microscopic appearances, represented by three basic patterns: tubules, cords, and small nests, formed of cuboidal cells with vacuolated cytoplasm which are also characterized by peripheral eosinophilic and lymphocytic infiltration(12). Important indicators for diagnosis of adenomatoid tumor is the presence of gaping spaces with no lining indicating a necrotic tubular component and small spaces representing ghost remnants of the typical vacuolar spaces. Differential diagnosis for adenomatoid tumor includes malignant mesothelioma, metastatic carcinoma, carcinoma of the rete testis and hystocytoid hemangioma. IHC confirmation with mesothelial-related markers (calretinin, HMBE1) helps differentiating from nonmesothelial tumors(13).

Origin of adenomatoid tumor is controversial. Some pathologists consider it as a reaction to injury or inflammation. It is difficult to demonstrate such irritating factors in intrascrotal adenomatoid tumors. However, cytoplasmatic keratin presence, raised concentration of hyaluronic acid and absence of CEA, relation to factor VIII, along with the presence of the mesothelial antigen, found by using indirect immunoperoxidase technique, points towards the proposed theory of mesothelial origin(14).

CONCLUSION

Epididymal adenomatoid tumour is a rare paratesticular benign neoplasm with many differential diagnoses, which is clinically similar to its malignant counterparts. The radiological signs are nonspecific and do not accurately differentiate between a benign and a malignant neoplasm. Though malignancies are infrequent, intrascrotal paratesticular masses should be dealt with high degree of suspicion.

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