ORIGINAL RESEARCH PAPER
Volume - 11 | Issue - 03 | March - 2022 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

ADENOMATOID TUMOR OF EPIDIDYMIS - A REPORT OF TWO CASES

Pathology

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ABSTRACT

Introduction: Adenomatoid tumors are rare benign mesothelial neoplasms. They usually occur in the paratesticular region, mostly in the tail of the epididymis. However, they may occur in some other parts of the genitourinary system. It is the most common paratesticular tumor of middle aged patients and rare in children. Case series: We came across two cases of Adenomatoid tumor, one in a 24 year old patient located in the tail of the right epididymis presented with a history of small lump in the right hemiscrotum for 2 years . The other ntumor occurred in a 38 year old patient in the tail of left epididymis presented with a history of slowly enlarging left sided intrascrotal mass, which was present for 6 months and was associated with mild pain since last 1 month. The tumor was located by ultrasonography and surgical excision was done and confirmed by histopathological analysis. **Conclusion:** Adenomatoid tumor of the epididymis is a rare benign tumor, sometimes confused with testicular tumors. It is difficult to differentiate it clinically and radiologically from other intrascrotal tumors. Histopathological examination after excision of the tumor gives a definitive diagnosis.

KEYWORDS

Adenomatoid tumor, epididymis, mesothelial, paratesticular region

INTRODUCTION

The adenomatoid tumors are the most common benign paratesticular tumor. They usually occurs in the upper pole of epididymis. They are of mesothelial origin[1]. Of all intrascrotal tumors paratesticular tumors represents less than 5% of cases. Out of all paratesticular tumors adenomatoid tumors constitute of 30% cases.[2] In males, it may also occur in spermatic cord, tunica albugenia and tunica vaginalis. In females, it can occur in the uterus, fallopian tubes, ovary and paraovarian tissues. It is a non hormone dependent tumor.[3] These tmors are small, nontender masses and intrascrotal in location. Excision is the treatment and diagnosis is confirmed by histopathological examination.

Histologically these tumors can be classified as adenoid, tubular, glandular, angiomatoid, solid, cystic or transitional type[4].

We present here two cases with intrascrotal swelling, preoperatively diagnosed clinically and ultrasonography as intrascrotal tumor. The diagnosis was confirmed in both these cases by histopathological examination after surgical excision.

Case 1:- A 24 year old patient presented with a 2 year history of a slowly enlarging, firm, painless small swelling in the right hemiscrotum.

He complained of mild discomfort and pain in the right hemiscrotum mainly during exercise for last one month. But the pain used to subside after afterwards. During rest he did not feel any pain. For this pain he came to the Surgery OPD.

The clinical examination revealed a round, firm, nontender mass on the right hemiscrotum in the lower pole of the epididymis. All his other physical examination findings were normal and he did not have any significant past medical or surgical history. The scrotal skin, left and right testis, all other external genital parts were normal No lymph nodes were palpable. No history of trauma was reported.

CBC, coagulation profile ,other routine biochemical examination and values of specific tumor markers of plasma levels of Beta-HCG (Beta subunit human chorionic gonadotropin), AFP(Alpha fetoprotein), LDH (Lactate dehydrogenase) were within normal ranges.

Ultrasonographic examination of the scrotum revealed the presence of a (22x16)mm well defined round shaped heterogeneously hyperechoic solid space occupying lesion with internal hypoechoic area in the right epididymal tail.(Fig. 1)

Surgical excision was done and the tumor tissue sent for histopathological examination, The tumor measured (1.8X1.5) cm. The cut surface was solid and white, (Fig.2)

Microscopically, there were cuboidal epithelial cells arranged in clusters and also in the form of tubules into a fibrous stroma. Single cells with intracytoplasmic vacuolization was seen. (Fig.3). The diagnosis of Adenomatoid tumor was confirmed.

One year post operative follow up showed no recurrence.

Case 2:- A 38-year-old patient presented with a 6 month history of small, firm, painless swelling in the left hemiscrotum. He did not report any trauma or inflammation of that area . The size of the lump did not change significantly during this 6 month period. He complained of mild pain since one month. On examination a small, round, non tender mass on the left side of the scrotum in the tail of the epididymis. It was separate from the left testis and was smooth and firm in consistency. No other abnormalities were detected at the rest of the scrotum, testicles or groin.The laboratory investigations, complete hemogram, urea, creatinine, liver function test were within normal limits. The plasma levels of Beta-HCG (Beta subunit human chorionic gonadotropin), AFP(Alpha fetoprotein), LDH(Lactate dehydrogenase) were normal . Ultrasonographic examination of the left scrotum revealed the presence of a well demarkated, solid, hyperechoic mass without invasive behaviour at the tail of the left epididymis,(1.3x1.1)cm in size. It was excised and sent for histopathological examination .

Histopathological examination showed the presence of epithelial cells in solid clusters, some with abundant granular eosinophilic cytoplasm. Single cells with intra cytoplasmic vacuolization also noted. Admixed lymphoid cell aggregates seen. The intervening stroma is fibroconnective mixed with smooth muscle.(Fig.4)

The postoperative period was uneventful and after 12 months follow up revealed no signs of recurrance.

DISCUSSION

Golden et al first described the adenomatoid tumor as small intrascrotal mass in 1945. These tumors are usually small in size, about 2cm . The largest tumor reported had 12 cm diameter[5]. In our cases also one tumor measured 2.2 cm and the other was 1.3 cm in diameter. They can occur at any age from 18 years to 80 years[5]. Most commonly seen in third to fourth decade[6-7]. In our cases the age of the patients were 24 year and 38 year respectively. These tumors usually arise in the epididymis and approximately 14% of the paratesticular adenomatoid tumors arise in the testicular tunica[6]The adenomatoid tumors are found in genital tracts of male and females The occurrence of the adenomatoid tumors in genital area is not known but it can be found in adrenals, lymph nodes, pancreas, mediastinum and pleura[8]. These tumors are unilateral. They are more common on the left side of epididymis[9]. We also had one left sided adenomatoid tumor.

An incidence of 1 per 1,00,000 cases has been reported and adenomatoid tumors represents 5% of all the intrascrotal tumors(excluding cord lipoma) and 70% of all epididymal tumors[8]. In addition to the epididymis, it can also occur in spermatic cord, prostate and ejaculatory ducts in males. In females, it occurs in the uterus, fallopian tube and ovary. In our cases, one patient aged 24 years presented with a tumor of 2.2cm in diameter and was located in the tail of right sided epididymis, while another patient aged 38 years had a tumor of 1.3cm in diameter and was located in the tail of the left sided epididymis

Ultrasonography is the investigation of choice because it is safe, easily available, cheap and with high sensitivity and specificity. It plays a significant role in preoperative diagnosis[5]. Sometimes the tumor seems to invade the parenchyma, especially in tumors in the head of epididymis, when MRI is recommended[10-11]. In both of our cases, preoperative ultrasonographic study showed a well demarcated mass, without evidence of unclear boundaries or invasion into the adjacent structures.

Microscopically, adenomatoid tumors of epididymis show epithelial like cells forming solid cords, tubules and microcystic spaces lined by cuboidal or flattened epithelium. Vacuolated cytoplasm is the main feature of the neoplastic cells. The stroma is usually fibrous and contains smooth muscle cells[11]. In one of our two cases, microscopy reveals the presence of microcystic spaces ,prominent epitheloid neoplastic cells in solid clusters, some with abundant granular eosinophilic cytoplasm, admixed with lymphoid aggreagtes, with intervening fibrous stroma also containing smooth muscles.

Immunohistochemically, adenomatoid tumor is positive for markers such as CK(AE1/AE3), EMA, CAM 5.2, CK5/6,CK7, Calretinin, Vimentin, WT1, and HBME-1(Mouse anti-human antigen mesothelial cell). Other tumor markers like AFP, LDH, CEA, Beta-HCG are found to be negative, being substantial for the exclusion of malignancy[12-15].

The differential diagnosis includes Fibrous pseudotumor of the epididymis, leiomyoma, papillary cystadenoma, extra testis and angiolipoma[14].Surgical excision is the standard treatment in these case cases[15]. Then the diagnosis is confirmed by histopathogy[11].

CONCLUSION

Adenomatoid tumor of the epididymis is a rare benign tumor. Clinically it is sometimes confused with other tumors. Pre operative USG is helpful. After excision histopathological examination confirms the diagnosis.

Legends

Fig. 1 USG shows a small hyperechoic nodular lesion at the tail of right epididymis
Fig. 2 Cut surface shows solid greyish white mass
Fig. 3 Tubular spaces lined by cuboidal cells (H&E – 100X)
Fig. 4 Epithelial cells in clusters with intracytoplasmic vacuolization along with lymphocytes (H&E-100X)

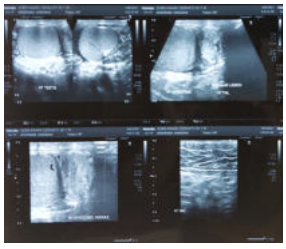

Fig.1

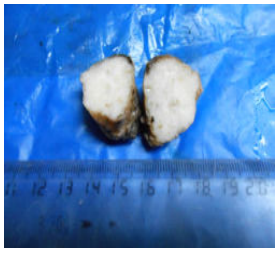

Fig.2

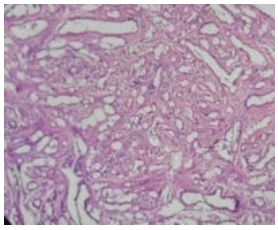

Fig.3

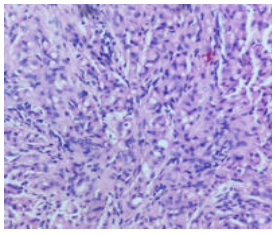

Fig.4

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