Case Report

Paratesticular Hamartoma in an Infant

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Abstract :

The benign paratesticular solid lesions have more often been post-operative histological surprises. We report a rare case of hamartoma of paratesticular region. On inguinal exploration, lesion looked benign and it could be excised completely without opening the tunica. The mass had disorganised mature tissue consisting of lipocytes, thick walled blood vessels, lymphoid follicles, nerve bundles and smooth muscle tissue, without neoplastic characteristics. Any suspicious paratesticular lesion warrants an inguinal approach, as we did in our case, to prevent upstaging of the disease in case found to be malignant. However, since benign masses are more common a testicular sparing surgery is possible in a majority of cases.

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Introduction

Solid masses in the testicular and paratesticular region are rare in the pediatric age group more so in infancy. Fibrous hamartoma of infancy (FHI), juvenile xanthogranuloma, capillary hemangioma, desmoid tumor, lipoma of the cord are some of the rare pathologic findings among the benign masses in the paratesticular location. We report a case of paratesticular hamartoma in a 10 month old child.

Case report

A 10 month male child presented with a swelling in the right hemi-scrotum. The swelling was noticed by the parents at 7 months of age. The swelling was not painful and there had been no change in the size. On examination, a 2x1 cm swelling could be palpated separate from the testis in the right hemiscrotum. It was firm, non-tender and appeared attached to the spermatic cord. Ultrasound revealed a 1x1.5 cm hypoechoic lesion over postero-medial aspect of the right testis suggestive of hydrocele of the cord

or a paratesticular neoplasm. The cord and testis were explored through the inguinal incision. A 1.5x1 cm solid lesion in close association with the testis was found. There was no evidence of invasion of cord or the testis. A complete excision of the lesion was done without any damage to the testis or the cord. Histopathology showed disorganised mature tissue consisting of lipocytes, thick walled blood vessels, lymphoid follicles, nerve bundles and smooth muscle tissue, foci of fat showed fat necrosis, the necrotic fat being surrounded by neutrophils, foamy macrophages and giant cells. Since the lesion was composed of well differentiated mature structures, and there was absence of neoplastic characteristics, a diagnosis of hamartoma was made.

Discussion

The paratesticular region includes contents of the spermatic cord, rete testis, testicular tunics, epididymis and vestigial remnants of Mullerian and Wolffian origin.

Figure 3 : microscopy showing disorganised mature tissue consisting of lipocytes, thick walled blood vessels, lymphoid follicles, nerve bundles and smooth muscle tissue, foci of fat showed fat necrosis, the necrotic fat being surrounded by neutrophils, foamy macrophages and giant cells.

Histogenetically this area is composed of epithelial, mesothelial and mesenchymal elements.¹ Paratesticular tumors are rare in the pediatric age group and extremely rare in the infants. In the series which have evaluated the testicular and paratesticular tumors in pediatric age group, benign tumors formed the majority of them.^{2,5} The most common pathologic finding was of a mature teratoma.^{2,5} However, when exclusively paratesticular tumors are taken into consideration, the most common histopathologic variant is rhabdomyosarcoma.⁶ Fibrous hamartoma of infancy (FHI), lipoma of the cord, capillary hemangioma, desmoid tumor and juvenile xanthogranuloma are some of the rarer paratesticular lesions reported in the previous literature.^{4,5,7} Other benign diagnoses, such as omental inguinal hernia, inflammatory pseudotumor, and meconium peritonitis have been described in this location; however, in these cases, the mass is usually inside the patent processus vaginalis.⁸ Testicular and paratesticular tumors need to be differentiated from more common

Figure 2 : Excised specimen of paratesticular hamartoma

conditions like inguinoscrotal hernia, hydrocele which can be accomplished clinically in majority of the cases. In some cases it may require a scrotal ultrasound to differentiate between these entities. The term hamartoma is used to specify tumor like malformations in which various tissues are present in improper proportions or distributed with prominent excess of one particular tissue. The line of demarcation between a hamartoma and a benign neoplasm is often unclear, as both lesions can be clonal.⁹ Hamartomas may be derived from any of the three germinal layers but are most frequently derived from the mesoderm. Though the entire tissue was processed we did not find any ectodermal components and hence teratoma was ruled out. Since the lesion did not show fibroblastic proliferation, the diagnosis of Fibrous hamartoma of Infancy was ruled out. Any suspicious lesion warrants an inguinal approach, as we did in our case, thus preventing the scrotal violation. The lesion, in the present case, looked benign intra-operatively with no local invasion, and it could be excised completely without injuring the testis or the cord.

Conclusion

We report a rare case of a paratesticular hamartoma other than the FHI. Paratesticular tumors being rare in the infants should be approached with caution. Inguinal incision is ideal to deal with these lesions as possibility of a malignant neoplasm always exists. As benign lesions form majority of the cases, testis sparing surgery should be the first option based on the intraoperative findings.

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