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Case Report

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"A RARE CASE OF RETROPERITONEAL MALIGNANT GERM CELL TUMOR IN A CRYPTORCHID TESTIS"

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ABSTRACT

The increased risk of testicular germ cell tumor in males with a history of cryptorchidism has been known. The relative risk of malignant transformation is 4 to 6 times. In our case, malignant germ cell tumor was found in a large mass arising from left side of a cryptorchid testis.

KEYWORDS: Cryptorchid testis, malignant germ cell tumor.

INTRODUCTION

Testicular cancer is the most common malignancy among men aged between 20 to 40 years.[1,2] Male patients with cryptorchidism are four to six times more likely to be diagnosed with testicular cancer.[1] Cryptorchidism is a developmental defect in which the testes fail to descend completely into the scrotum.Undescended testis is unilateral in 80% cases. About 70-77% of cryptorchid testes will spontaneously descend usually by 3 months of age.[3] Approximately 10% of testicular tumors arise in undescended testes. The greater is the risk for development of malignancy with the higher position of the testis. Almost about half of the tumors that occur in testes are located abdominally, with 6-fold higher frequency than in an inguinal testis. The most common tumor that develops from the cryptorchid testis is the seminoma. Complications of intra-abdominal testis such as torsion, rupture and bleeding are rare. Hereby we describe a case of huge malignant germ cell testicular tumor, predominantly seminoma that had developed in a leftsided cryptorchid testis.

CASE REPORT

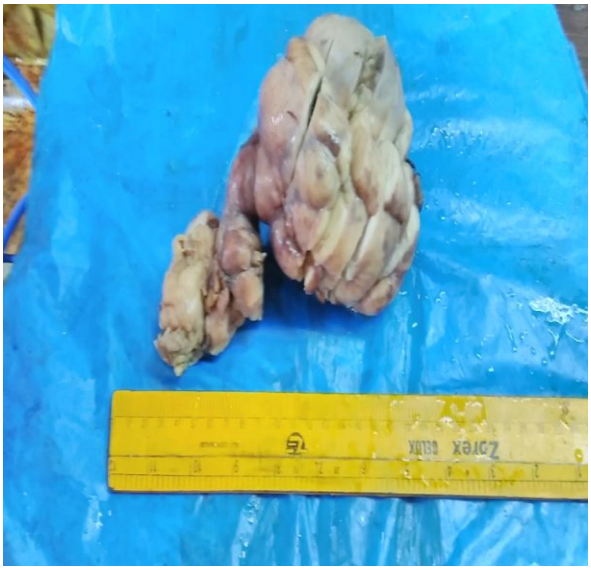
A 40 years old male,who has a 10 years old son, c/o sudden onset of acute pain. On admission, his pulse rate was high & blood pressure was stable. On palpation there was tenderness in the left flank region. A large diffuse, ill defined mass was palpable which involved almost the whole of lt. side of abdomen, .CBC showed high WBC count with neutrophilia. USG findings are suggestive of huge ill defined multi lobular mass along the left side of pelvis and lower abdomen with internal vascularity and vascular changes suggestive of retroperitoneal mass/sarcoma. Mild hydronephrosis in rt. kidney probably due to compression by large pelvic mass.

CT scan of abdomen showed retroperitoneum full of multiple lymph nodes seen in left paraaortic region abutting kidney(Fig.4,5,6).

FNAC of large pelvic mass –groups of large atypical cells with features of malignancy.

Patient's history revealed that he had untreated cryptorchidism on the left side since childhood. Serum tumor markers showed Alpha-fetoprotein, 06.34ng/ml, serum β-HCG 917.0 ml U/L and serum LDH 86 units/l . Exploratory laparotomy was done under general anesthesia and a huge, approximately 10 x 8×4 c.m. mass was found in the abdominal cavity which was excised &sent for HPE. (Fig-1). On gross examination,it was a huge mass,lobulated &greyish white .On cut section,it is solid,greyish white with focal cystic changes(fig.2).

HPE showed a tumour mass composed of round to oval cells with prominent nucleolus &clear cytoplasm. LP view showed nested pattern(fig.3).Atypical mitosis also noted(fig.7). Diagnosis of malignant germcell tumour was made(seminoma). After one month, post operative tumor markers were Serum β- HCG <.18mIU/ml, serum Alpha Fetoprotein 07.10ng/ml and Serum LDH 30 units/l.



[Fig-1] Gross Specimen of Mass.

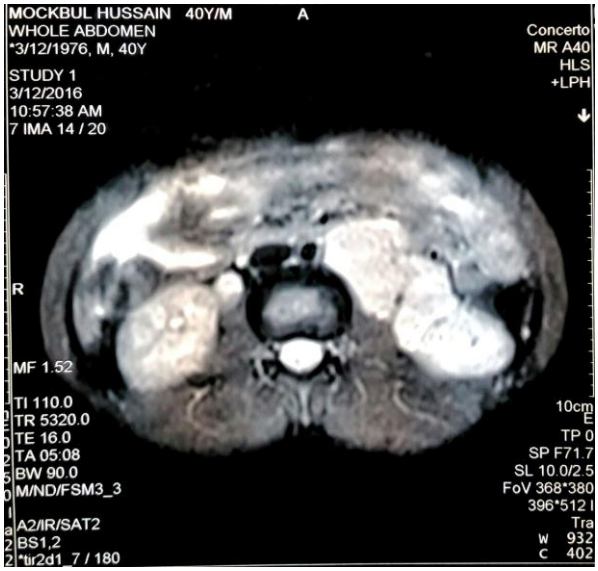
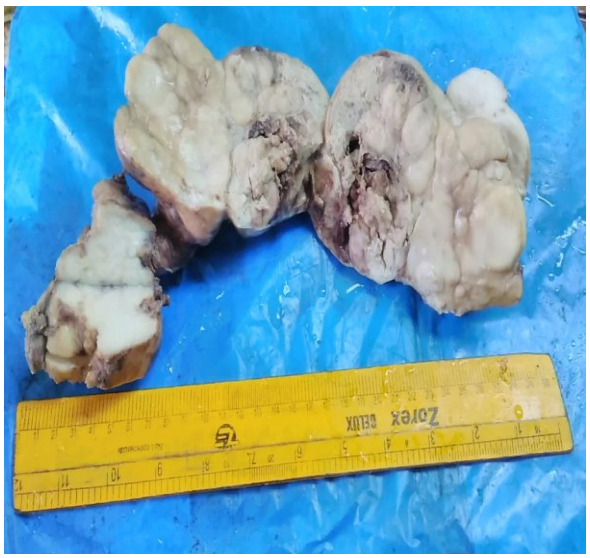


Fig-4,5,6 Ct Scan Of Mass.



[Fig-2] Cut Section of Mass.

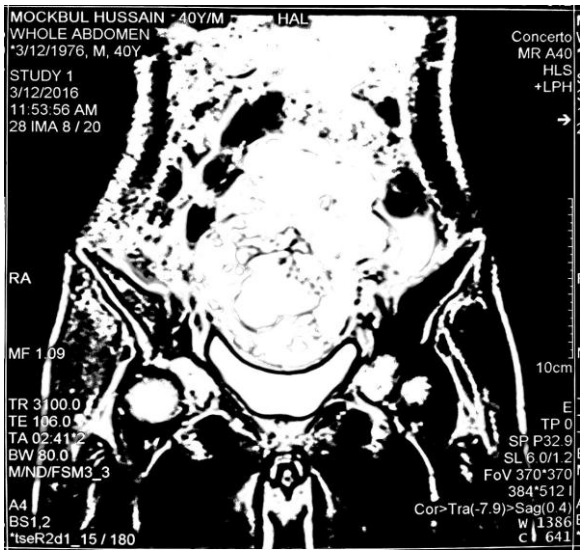


FIG.5

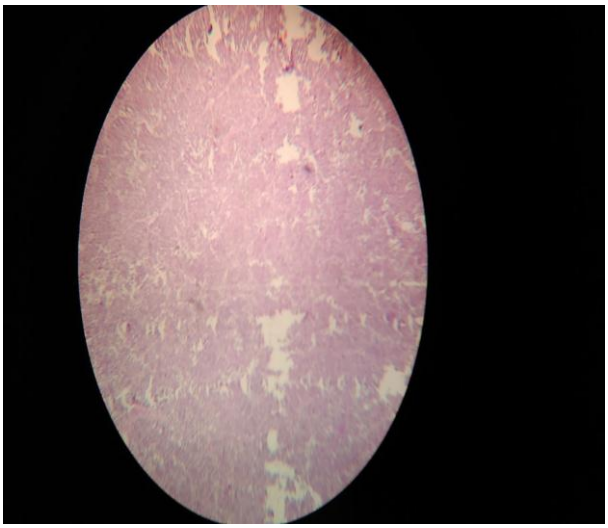


Figure 3.LP View showing nesting pattern of tumour cells

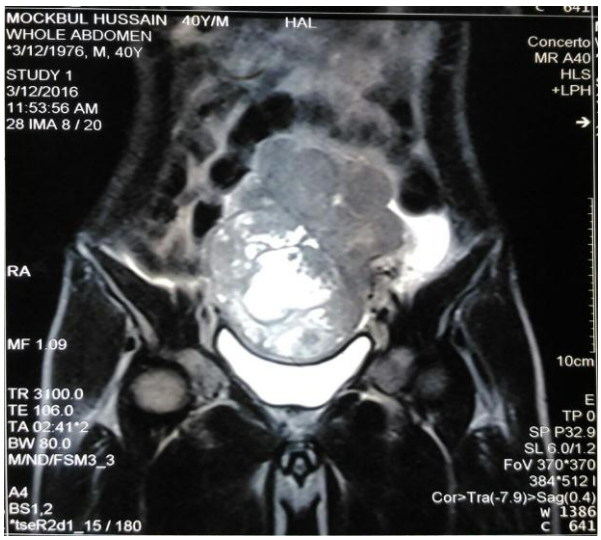


FIG.6

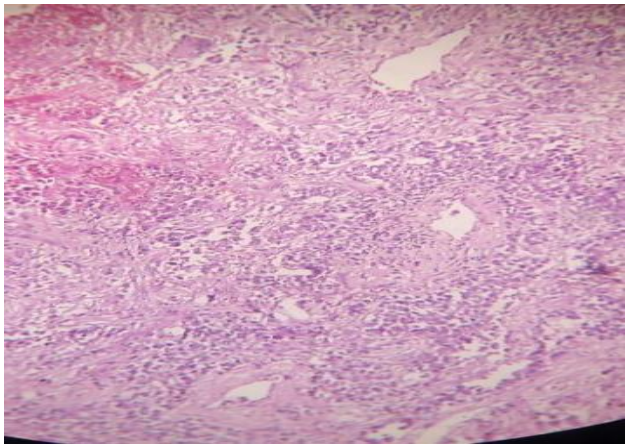


FIG-7: HP view-shows Giant cell (Syncitiotrophoblast).

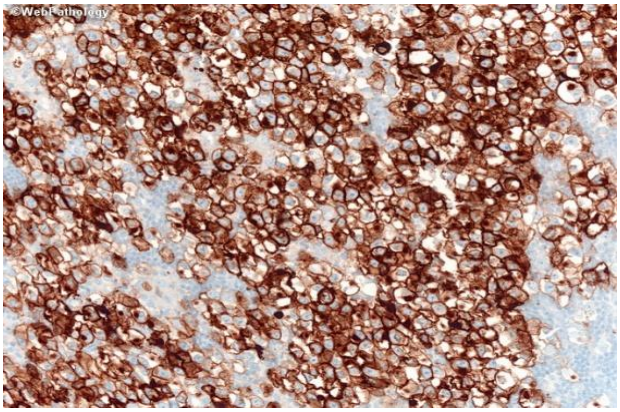


Fig 8: IHC showing PLAP positivity

DISCUSSION

About 10% of testicular tumors arise from undescended testes, and the risk of developing a germ cell tumor when a cryptorchid testis is intra-abdominal is approximately 5%.[4] In mixed groups of men treated for cryptorchidism, the risk is typically 4 to 6 times higher than in the general population. The incidence curve rises sharply after the onset of puberty, and occurrence is most frequent in men in their 20s and 30s; 50% are diagnosed before the age of 35. While orchidopexy improves fertility, it does not alter the risk of developing carcinoma. Instead, it improves the clinical surveillance of patients with a previously impalpable gonad.[5] The most common tumor that develops from the cryptorchid testis is seminoma. Ultrasonography, MRI imaging, CT and Gallium scanning are usually used in the monitoring of an intra-abdominal testis.[6]

Our case presented with an intra abdominal mass which proved to be anaplastic germcell tumour(seminoma)in a case of undescended testis in an adult male patient of 40 years having one issue. The seminoma is the most common testicular tumor of adult which presents most frequently in combination with other histological types and this non seminomatous part is responsible for the production of AFP. But in our case, it was purely malignant(anaplastic) seminoma without any other associated germ cell component.It is characterised by 3/more mitoses per HPF & has a aggressive clinical course.[7]

Estimation of tumour markers showed high serum β-HCG level with normal AFP level.Serum LDH was within normal range.The elevation of β-HCG was due to presence of synciotiotrophoblast that was shown in microscopy.[8]

Serum tumor markers; β-HCG and AFP are important for diagnosis, prognosis and follow-up. If the AFP level does not return to normal post orchidectomy, metastatic disease must be suspected.[7] In our case,AFP was normal which is in accordance with our HP findings.
Lymphatic spread is common in all germ cell testicular tumors except pure choriocarcinoma which disseminates by vascular invasion. CT findings of our case showed multiple peritoneal lymph nodal enlargement which is in accordance with lymphatic dissemination.

Seminoma cells contain usually abundant amount of glycogen which is responsible for its clear cytoplasm.IHC showed reactivity for PLAP(PLACENTAL ALKALINE PHOSPHATASE), CD117,OCT ¾ BUT NEGATIVE FOR EMA,CD30&SOX2.Our case show focal PLAP positivity(Fig.8).

CONCLUSION

Retroperitoneal mass is not an uncommon presentation in cryptorchid testicular neoplasia but radiological study and FNAC are insufficient to give accurate diagnosis, so history and clinical examination is very important in diagnosis of a retroperitoneal lump.

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