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Case Report

Undescended intra abdominal testis

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E-mail: vijugunnu@gmail.com**Abstract**

Seminoma is the most common single histologic type of germinal testicular neoplasms. The undescended testicles carry 20-48 times higher potential for malignant transformation. We present a 30 year old male with malignant undescended intra abdominal testis.

Keywords: Abdominal mass; Seminoma testis**1.Introduction**

Normally, the testes, which are inside the abdomen during gestation, migrate into the scrotum by the time of birth. Occasionally, boys are born with testes that are still in the abdomen or in the groin, not having completed their journey to the scrotum. These undescended testes are at high risk of cancer and should be moved into the scrotum at an early age or removed entirely.

An undescended testis is at a higher risk for development of testicular germ cell tumor, most commonly seminoma. These are seen infrequently with the incidence of one in 500 men but can be associated with complications like cancer, infertility and ischemia[1]. The peak age of cancer in undescended testis is similar to that in scrotal testes, generally the third to fourth decade of life.

Clinically they can present as asymptomatic mass or symptoms simulating appendicitis or retroperitoneal mass, incarcerated hernia, urinary frequency or dysuria from mass effect on bladder or acute abdominal pain due to torsion and hemorrhage[2][3][4].

2.Case Report

A 30 year old male presented with abdominal mass with a history of dragging pain in the right iliac fossa, radiating to the groin since 6 months.

The patient was afebrile and revealed a 20×15 cm mass of in the right iliac fossa. It was tender and not freely mobile. His right scrotal sac was empty. Right testis was not palpable. Other examination was within normal limit. Patient has two children. Provisional diagnosis of malignant intraabdominal testis was made.

LDH was 2335.6 units/L. B-HCG and AFP was normal. Sonography was performed which revealed a well-defined mixed echogenic mass in the Right iliac fossa with empty right scrotal sac and with? Atrophic left testis.

A contrast-enhanced abdominal computerized tomography scan demonstrated a well-defined soft tissue density of size 13 cm × 10 cm × 14 cm in the right iliac fossa with gonadal vessels and vascularity with empty right side of the scrotum. Possibility of Seminoma to be considered.

Exploratory laparotomy was performed. Surgical exploration revealed a soft mass in the right iliac fossa with gonadal vessels. The mass was excised after ligating the spermatic cord. Testicular biopsy was taken from the left testis. **[Figure 1]**

Histopathology of the specimen grossly revealed 16.5×13×7 cm encapsulated mass. Cut section shows soft pink greyish mass and friable? Necrotic. Microscopy section reveal well

encapsulated tumor mass. Tumor cells are arranged in sheets separated by fibrous septa, containing lymphocytes. Tumor cells are round to polyhedral with round oval nucleus with round nuclei with moderate eosinophilic cytoplasm. At places clear cytoplasm is also seen. Stroma is delicate, scanty with congested blood vessels & lymphocytes. At

places tumor cells are seen to invade the tunica albuginea. Histological are consistent with Seminoma testis. Left testicular biopsy report was normal.[Figure 2]

Post operative period was uneventful and patient was referred to oncologist for further needful.

Figure 1: Exploratory laparotomy and excision of mass (a-d)

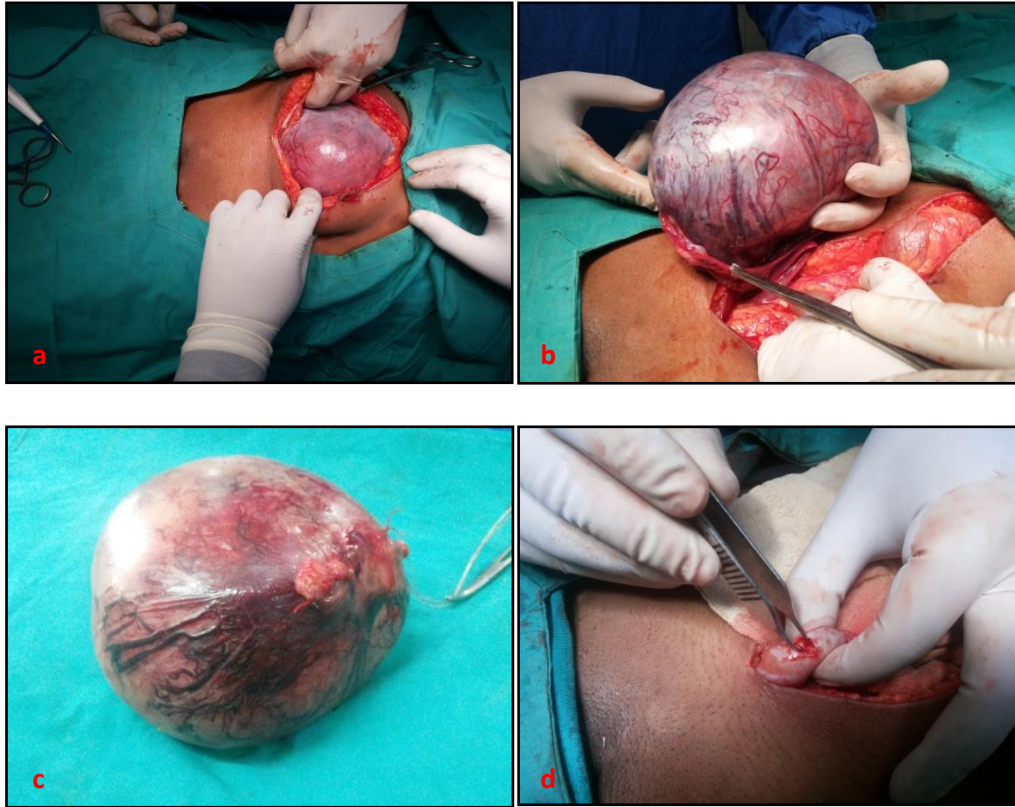
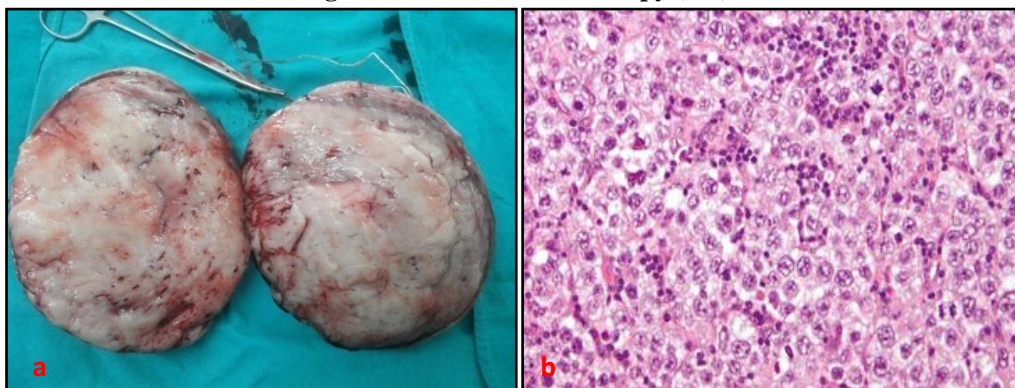


Figure 2: Gross and Microscopy (a-b)



3. Discussion

Testicular ectopia is uncommon and the most frequent ectopic location of testis are superficial inguinal pouch, in front and lateral to the external inguinal ring and very rarely in the abdomen[5]. The position of the undescended testis is related to the likelihood of carcinogenesis with intra-abdominal testis having the highest malignant potential. The

majority of undescended testes locate distal to the external inguinal ring and are palpable[6].

The cause of carcinogenesis is still an enigma. A high intra-abdominal temperature has been incriminated as the cause of carcinogenesis in the testis. There may be a decrease in the spermatogenesis, Leydig cell abnormality, and delay in the development of the Sertoli cells in the testis leading to infertility[7][8].

Rarely, an abdominal testicular tumour can cause acute abdomen, massive abdominal mass, pain, and hematuria because of adjacent visceral infiltration[9][10].

There are three clinical stages for the determination of extension.[11]

Table No. 1: Clinical stages for the determination of extension

Stage 0	Abnormal cells are found in the tiny tubules where the sperm cells begin to develop. These abnormal cells may become cancer and spread into nearby normal tissue. All tumor marker levels are normal. Stage 0 is also called carcinoma in situ.
Stage I A	Cancer is in the testicle and epididymis and may have spread to the inner layer of the membrane surrounding the testicle. All tumor marker levels are normal.
Stage I B	<ul style="list-style-type: none"> • In the testicle and the epididymis and has spread to the blood vessels or lymph vessels in the testicle; or • has spread to the outer layer of the membrane surrounding the testicle; or • in the spermatic cord or the scrotum and may be in the blood vessels or lymph vessels of the testicle. <p>All tumor marker levels are normal.</p>
Stage I S	cancer is found anywhere within the testicle, spermatic cord, or the scrotum and either: <ul style="list-style-type: none"> • all tumor marker levels are slightly above normal; or • one or more tumor marker levels are moderately above normal or high.
Stage II A	<ul style="list-style-type: none"> • anywhere within the testicle, spermatic cord, or scrotum; and • Has spread to up to 5 lymph nodes in the abdomen, none larger than 2 centimetres. • All tumor marker levels are normal or slightly above normal.
Stage II B	cancer is anywhere within the testicle, spermatic cord, or scrotum; and either: <ul style="list-style-type: none"> • spread to up to 5 lymph nodes in the abdomen; at least one of the lymph nodes is larger than 2 centimetres, but none are larger than 5 centimetres; or • has spread to more than 5 lymph nodes; the lymph nodes are not larger than 5 centimetres. • All tumor marker levels are normal or slightly above normal.
Stage II C	<ul style="list-style-type: none"> • anywhere within the testicle, spermatic cord, or scrotum; and • Has spread to a lymph node in the abdomen that is larger than 5 centimetres. • All tumor marker levels are normal or slightly above normal.
Stage III A	<ul style="list-style-type: none"> • anywhere within the testicle, spermatic cord, or scrotum; and • may have spread to one or more lymph nodes in the abdomen; and • has spread to distant lymph nodes or to the lungs. • Tumor marker levels may range from normal to slightly above normal.
Stage III B	<ul style="list-style-type: none"> • is anywhere within the testicle, spermatic cord, or scrotum; and • may have spread to one or more lymph nodes in the abdomen, to distant lymph nodes, or to the lungs. • The level of one or more tumor markers is moderately above normal.
Stage III C	<ul style="list-style-type: none"> • is anywhere within the testicle, spermatic cord, or scrotum; and • may have spread to one or more lymph nodes in the abdomen, to distant lymph nodes, or to the lungs. • The level of one or more tumor markers is high.

Orchiopexy does not alter the malignant potential of the cryptorchid testis; however, it facilitates examination and tumour detection[12] The standard initial treatment for testicular tumors is a radical inguinal orchiectomy.

Following orchiectomy, further treatment depends on the histology, risk category, stage of disease, and patient preferences. Further treatment

may consist of regular surveillance, retroperitoneal radiation therapy, retroperitoneal lymphadenectomy (RPLND), systemic chemotherapy, or a multimodal therapy approach. The decision making is complex, is still evolving, and is beyond the scope of this discussion, but several general principles apply:

For seminoma stage I disease, one must decide among surveillance, radiation to regional

lymph nodes (25 to 30 Gy), or limited prophylactic chemotherapy. Seminoma is a radiosensitive tumor but the radiation has potential morbidity, with a risk of delayed secondary malignancy as high as 15% within 25 years of treatment.

For seminoma stage II, abdominal radiation therapy is typically favoured;

For stage IIC or III, platinum based chemotherapy is offered.

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