

Giant Seminoma in an Undescended Testis Presenting as a Mass in the Right Iliac Fossa

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Abstract

Seminoma in undescended testes may present as right iliac fossa mass. A seminoma in a 49 year old man with ipsilateral undescended testis is presented and relevant literature is reviewed. A 49 year old male presenting with a right iliac fossa mass was admitted to our hospital and initial diagnostic tests followed by abdominal computerized tomography (CT) were performed. Abdominal CT clearly demonstrated the tumor location. He underwent surgery and the tumor was not operable and biopsy was taken. Pathological diagnosis was consistent with classical seminoma. He was referred to oncology clinic after discharge. Tumors of undescended testis can present as a right iliac fossa mass and clinicians must be aware of their existence.

Keywords: Seminoma; Undescended testes; Right iliac fossa mass

Introduction

Germ cell tumors (GCT) of testes can be benign (teratomas) or malignant (seminoma and non-seminoma). GCT most frequently occurs in the gonads, only 2-5% of them arise in extra-gonadal regions such as the mediastinum, retroperitoneum, pineal gland and sacral area [1].

Cryptorchidism carries a higher potential for malignant transformation than normally descended testis. The position of the undescended testis is related to the likelihood of carcinogenesis with intra-abdominal testis having the highest malignant potential. The majorities of undescended testes locates distal to the external inguinal ring and are palpable.

Seminoma is the most frequent carcinoma of the testicle in the fourth decade of life and constitutes 60% to 65% of germ cell neoplasia [2]. Several histopathological characteristics of the tumor have been evaluated and three types of pure seminoma have been described: classic, anaplastic and spermatocytic [3]. We report a patient with seminoma arising in an undescended testis which presented as a palpable mass of right iliac fossa.

Case Presentation

A 29 year old man married with five children, with no known previous complaint presented to the surgical unit, University Charity Teaching Hospital with complaints of abdominal swelling for 4 months. He had been suffering from anorexia, weight loss during last two months. The patient experienced dragging pain in the hypogastrium during the last two months.

On general examination the patient was found to be ill looking and mildly anemic. On local examination an intra-abdominal mass was palpable. The abdominal mass was elongated occupying the whole right iliac fossa and extending into the hypogastrium (12 cm × 8 cm approximately). The margins were ill defined, surface was irregular and consistency was hard. The lump was fixed with underlying structures and not tender. On digital rectal examination rectal mucosa was found to be free without any bulge. On examination of the inguinoscrotal region the left testis was found to be in place but the right testis was absent from the left scrotal sac.

Our provisional diagnosis was malignant tumor of the right intra-abdominal testis.

Investigations showed elevated alkaline phosphatase (5 times the normal) and B-HCG (6 times the normal). Sperm analysis and alpha fetoprotein were within normal ranges. The CT scan showed a huge solid mass arising from the pelvis with calcification, no liver lesions or para-aortic lymph node enlargement (Figure 1).

On ultrasonographic scanning of whole abdomen the right iliac fossa mass was demonstrated as large complex soft tissue mass (14.7 cm × 10.9 cm) with a hypoechoic oval area at the centre (suggestive of testicular growth). All other investigation reports were insignificant.



Figure 1: Showed huge solid mass arising from the pelvis.

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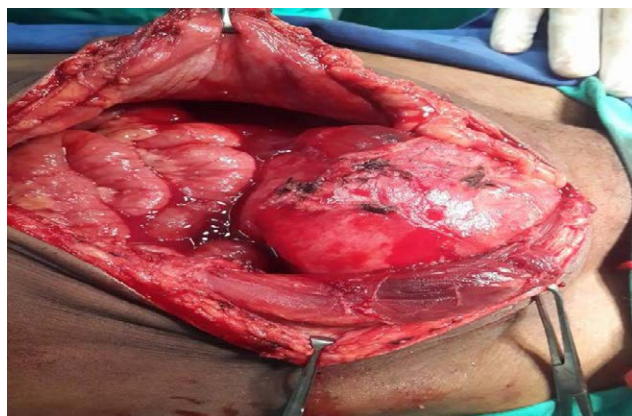


Figure 2: Abdominal mass during exploration.

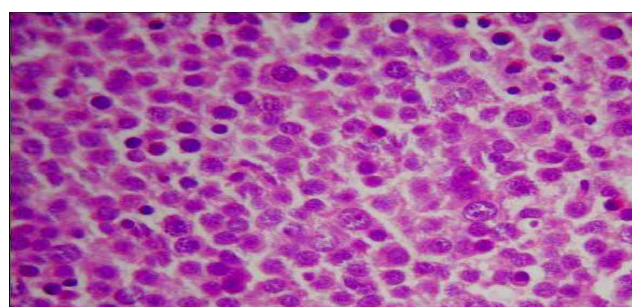


Figure 3: Photomicrograph of intra-abdominal left testicular tumor-seminoma.

We went for laparotomy with lower midline incision and found a huge growth occupying the hypogastrium and the right iliac fossa (Figure 2). The mass was adherent to the greater omentum, the sigmoid colon and the posterior abdominal wall. The mass was inoperable (Figure 2). The postoperative period was uneventful. The histopathological examination of the mass revealed Seminoma of testis (Figure 3). After two weeks the patient was subjected to combination chemotherapy under supervision of oncologist.

Discussion

Cryptorchidism is a common problem in Sudan [4]. It is a known cause of testicular tumor. The position of the undescended testis is related to the likelihood of carcinogenesis with the intra-abdominal location having the highest risk for malignancy. The incidence of testicular tumor is 10 times more in inguinal testes and 50 times more in intra-abdominal testes [5]. The cause of carcinogenesis is still debatable. A high intra-abdominal temperature has been incriminated as the cause of carcinogenesis in the testis [6]. There may be a decrease in the spermatogenesis, Leydig cell abnormality, and delay in the development of the Sertoli cells in the testes leading to infertility. In our case, there was no evidence of sterility due to the testicular malfunction and the patient has four children.

Painless enlargement of the testis is the common mode of presentation in an undescended testis. Rarely, an abdominal testicular tumor can cause acute abdomen, massive abdominal mass, pain, and haematuria because of adjacent visceral infiltration [7-10]. Our patient had no such complication. Dramatic improvements in survival have resulted from the combination of effective diagnostic techniques, improvement in serum tumor markers, effective multi-drug

chemotherapeutic regimens and modifications of surgical techniques during last twenty years.

In this particular case, the tumor was classified as Stage I classical seminoma with positive lymphovascular invasion (tunica vasculosa nested tumor cells). Unilateral rapidly enlarging abdominal mass with undescended testis should alert clinicians towards consideration of the possibility of seminoma and initiation of prompt intervention.

Seminomas tumors are very sensitive to chemotherapy and radiotherapy. Nichols recommends primary abdominal radiotherapy for patients with small volume retroperitoneal seminoma (abdominal mass <5 cm) and chemotherapy for patients with larger volume disease [11]. The prognosis is excellent in cases of seminomatous histology with 5-years survival rates >90% achieved with platinum-based chemotherapy. Furthermore, cisplatin-based chemotherapy reduces the risk of metachronous contralateral testicular germ cell tumor (TGCT), which cumulative incidence for patients with unilateral TGCT is 1-5% [12].

In conclusion, the abdominal variant of undescended testis is rare and carries a high risk of malignant transformation to seminoma. Primarily the parents, then the school medical officers and finally the patients himself must be aware of undescended testes and address the problem seriously. An undescended testis, whenever possible, must be brought down into its normal scrotal position within school going age. We think that our patient was presented to us late because he has no problems related to infertility and impotence, and for other social reasons.

Conflict of interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and publication of this article.

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