Case Report

A case report of large testicular mass: An Eastern Province report from KSA

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Abstract

Large testicular tumor is not a commonly seen entity in the modern era. While treatment of large testicular tumors is via inguinal radical orchiectomy, large testicular tumors carry the dilemma of delivering these large masses via the inguinal or scrotal approach. Here, we present a case of a 53-year-old male patient with a testicular tumor weighing 2.170 kg, measuring 22 cm × 16 cm × 12 cm, who was treated via inguinal orchiectomy with the extension of the surgical wound to the neck of the scrotum, with pathological report showing seminoma with no spermatic cord invasion. We review some case reports of such large tumors to illustrate this treatment dilemma.

Keywords: KSA, mass, testis, tumor

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INTRODUCTION

Testicular cancer is considered a rare malignancy globally; in this regard, testicular cancer is appraised as a disease of young and adult men. Although it can manifest in childhood with a reported percentage of 7%, the mean age of incidence in general population is between the ages of 20 and 34 years.[1] A rising trend in the incidence is observed worldwide including KSA. This noticeable growth in the incidence could be subjected to the birth cohort effect, with relation to geography, race, and socioeconomic status.[1] Considerable risk factors such as age, ethnicity, family history of testicular cancer, and cryptorchidism are acknowledged as well.[2]

Testicular germ cell tumors (TGCTs) are the most frequently encountered type of testicular cancer. Histologically, TGCTs are categorized into three categories: seminomas, nonseminomas, and spermatocytic seminomas with the seminomas and nonseminomas count as the majority of TGCT as much as 98%–99%.[3] Testicular cancer may present in different ways such as painless scrotal swelling, incidental finding in radiological imaging, and posttraumatic or metastatic symptoms. As that as it may be, the U.S. Preventive Task Force opposes screening for testicular cancer in asymptomatic young and adult patients with no testicular cancer risk. However, the American Cancer Society does recommend testicular examination as part of the routine cancer-related checkup.[3]

Presence of any kind of solid mass in the testis should it be identified by physical examination, or imaging is ought to be managed as a malignancy until proven otherwise.[4]

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The AUA guideline promotes the investigation of any suspicious solid mass in the testis with initial imaging by Doppler ultrasound and serum tumor markers, which consist of alpha-fetoprotein (AFP), human chorionic gonadotropin (hCG), and lactate dehydrogenase (LDH).

Findings of hypoechoic mass with vascular flow on the US investigation is highly skeptical of testicular cancer.[4] The standardized initial management of unilateral testicular cancer at the existence of normal contralateral testis is radical inguinal orchiectomy.[3] Radical inguinal orchiectomy is regarded as both therapeutic and diagnostic.[4] An attempt of taking trans-scrotal testicular biopsy should not be carried out as it may disturb the lymphatic drainage of the tumor and spoil the scrotum. The sample of the radical inguinal orchiectomy must be sent for histopathological interpretation.[5]

Testicular cancer treatment and prognosis plan is made in multi-multidisciplinary structure formula that involves histopathology, clinical staging, prognosis of the disease, and specialist–patient debate on positive and negative outcomes of the treatment. However, adjusted modified treatment plans based on risk-adapted therapy in nonseminoma patients are yet to prove its worth seminoma patients.[2] In 1997, the International Germ Cell Cancer Collaboration Group (IGCCCG) announced a new classification agreement for patient with metastatic germ cell tumor (GCT) which divides them into: good, intermediate, and poor prognosis. Categorizing each individual on response and risk of prolapse basis.[5] In light of these information and Since data of testicular cancer among Saudis is of scarcity.[1] We present in this case report what we believe is the largest testicular tumor to ever be reported here in KSA.

CASE REPORT

A 53-year-old Egyptian male referred to the urology outpatient's clinic at Qatif Central Hospital for the first time after an incidental finding of a huge testicular mass which was discovered by computed tomography (CT) during routine investigation as the patient presented complaining of the left loin pain.

Through taking history, it was a painless large left scrotal swelling noticed for approximately 12 months. There is neither history of constitutional symptoms nor preceding trauma, with unremarkable medical and surgical history. On examination, huge left scrotal enlargement was inspected without any skin changes. On palpation, the left scrotal hemisphere content was poorly identified.

Blood laboratory investigations reported elevated beta-hCG (13.34 IU/L), AFP (9.34 ng/ml), and LDH (714 U/L). Staging CT of the chest, abdomen, and pelvis demonstrated a huge left testicular mass with lower posterior mediastinal mass lesion, in addition to para-aortic and retrocrural lymph nodes enlargement.

The patient underwent left inguinal radical orchidectomy with extension of the surgical wound to the neck of the scrotum. The total solid tumor tissue weight was 2.170 kg, measuring 22 cm × 16 cm × 12 cm. [Figures 1 and 2]

The pathological diagnosis was seminoma with no spermatic cord invasion. In addition of finding an extensive involvement and replacement of testis by the tumor cells, with extensive necrosis and discohesive, floating tumor cells in the vascular like spaces, has been noted. However, the tumor extension and lymphovascular invasion could not be assessed. The patient was referred

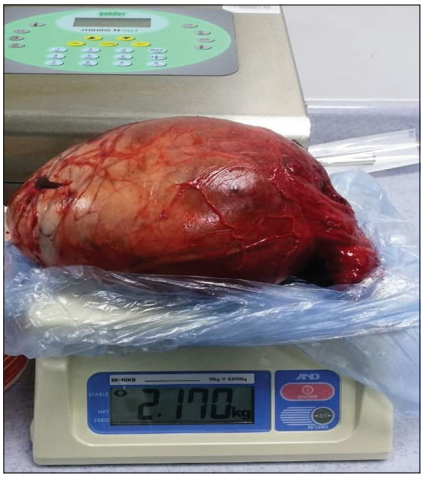

Figure 1: Weight of excised tumor

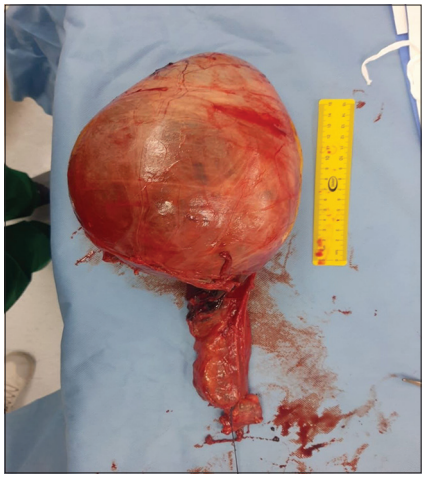

Figure 2: Excised tumor and testis

to a higher center for further multidisciplinary evaluation and management.

DISCUSSION

Since giant testicular cancer is rare, there are only a few cases reported in this regard. Divya Khosla *et al*. had reported a case of mixed malignant GCT measuring 22 cm × 15 cm × 12 cm with bilateral lung metastasis on a 16-year-old male; initial chemotherapy with bleomycin, etoposide, and cisplatin (BEP) was given since the tumor surgical resection was not amenable. A follow-up and re-evaluation after 2 cycles of chemotherapy were recommended.[6] Another case by Igor Tomasković *et al*. reported a case of a 21-year-old male with a 4.850 kg left testicular tumor and bilateral lung metastasis; the patient was managed with high left orchidectomy and 5 cycles of platinum-based chemotherapy. A follow-up CT after 1 month of completing chemotherapy cycles showed no sign of lung metastasis or lymph node enlargement.[7]

Furthermore, in 2020, Jackson *et al*. presented a case of a 22-year-old male with mixed GCT which is 25 cm × 15 cm × 15 cm in size and multiple, progressive bilateral lung metastases underwent emergency left radical orchidectomy followed by 4 cycles of chemotherapy with BEP. A follow-up CT showed reduction in the metastasis size and numbers despite this; the hCG and LDH levels have risen from the initial numbers which probably indicate a partial response.[8]

To summarize, review of the literature showed that this reported presentation is rare. Most of reported cases emphasize that radical orchidectomy is considered the diagnostic and therapeutic step for giant tumor, unless if it is not feasible clinically.

Once a large testicular mass is diagnosed, and before any further management, the patient must undergo radical orchiectomy to differentiate benign from malignant masses through intraoperative frozen section examination and analysis. Since any manipulation to the scrotum must be avoided, the approach used to reach into scrotum is through inguinal incision. Postoperatively, using the tumor markers level, the result of histopathology and the staging radiology, and based on AJCC/UICC and the IGCCCG, staging and prognosis of the tumor is established. Although some patients who showed good response postoperatively are not requiring further management with chemotherapy, the standard of care for patients with metastatic tumor is three to four cycles of BEP.[9]

CONCLUSION

Giant testicular cancer is considered one of the largest testicular masses in the world. Delayed seeking medical advice and appropriate management is the major cause behind this rare presentation. Increasing the awareness regarding self-examination and eliminating the stigma is the cornerstone to markedly reduce this type of unusual presentation since any testicular size change and mass can be easily noted by the patient.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient (s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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