A giant testicular mixed germ cell tumour

A Reekhaye, A Harris, S Nagarajan, D Chadwick

James Cook University Hospital, Middlesbrough, UK

ABSTRACT

We present a case that we believe to be the largest mixed germ cell testicular tumour reported in the United Kingdom. A 23-year-old male was admitted to our urology department with a large scrotal swelling. The patient was found to have a giant left testicular tumour and a solitary lung metastasis at presentation. He underwent an emergency radical orchidectomy and subsequently received four cycles of bleomycin, etoposide and cisplatin chemotherapy. Four months after starting treatment, the tumour markers had normalised and a repeat staging computed tomography showed no active disease. The tumour reached that size because of the patient's failure to seek medical attention due to fear and embarrassment.

KEYWORDS

Giant – Testicular tumour – Mixed germ cell – Orchidectomy

Accepted 17 January 2016

CORRESPONDENCE TO

Abhishek Reekhaye, E: a.reekhaye@doctors.org.uk

Large testicular tumours are rare. We present a case we believe to be the largest mixed germ cell testicular tumour ever reported in the United Kingdom.

Case presentation

A 23-year-old male presented to the emergency department with bleeding from an extremely enlarged scrotum. He reported first noticing the swelling over 18 months previously, and he received a course of antibiotics from his general practitioner for presumed epididymo-orchitis. Despite the swelling's continued growth, he did not seek further medical advice. He had taken to wearing baggy trousers to conceal the tumour, and had managed to disguise his altered anatomy from his family, with whom he lived.

On examination, the patient had a grossly enlarged scrotum, with broken and inflamed skin inferiorly. The left hemiscrotum was filled with a large heterogeneous mass that had firm and fluctuant-feeling areas. The right testis was just palpable laterally to the enlarged mass and felt normal. Initially, the attending clinician had suspected a hydrocoele.

Laboratory investigations revealed an alpha-fetoprotein level of 30,222 kU/L, a human chorionic gonadotropin level of 617 u/L and a lactate dehydrogenase level of 464 u/L. The patient's haemoglobin level was 119 g/L. He underwent an urgent ultrasound scan, which demonstrated a large left testicular tumour. Staging computed tomography confirmed the presence of a solitary lung metastasis.

Before starting four cycles of bleomycin, etoposide and cisplatin chemotherapy, the patient underwent an emergency radical left orchidectomy via an inguinal-scrotal approach. An

inguinal incision was made to locate and isolate the spermatic cord. The incision was then extended down over the scrotum to dissect out the tumour. A skin island was left on the tumour in the area of broken skin where the skin layer was particularly thin (Fig 1). The tumour was excised whole, with a weight of 2.47 kg.

Histological analysis (Fig 2) identified a mixed germ cell tumour comprised of yolk sac tumour (90%) and embryonal carcinoma (10%). The tumour was absent at the margin of the cord; however, it was detected in the fascial layers outside of the tunica, but not the skin (pT4).

Four months after starting treatment, the tumour markers had normalised and a repeat staging computed tomography showed no active disease.

Discussion

There are only a handful of cases of giant testicular tumours reported in the literature,¹ with our case the largest reported in the UK. Radical orchidectomy for giant tumours can be both diagnostic and therapeutic and should therefore always be performed first, unless the clinical situation requires immediate chemotherapy.^{1,2}

We used an inguino-scrotal approach for excision of the tumour due to its size (Fig 3). This method was also recently described by Al-Assiri et al,³ as well as Jihad et al.⁴ It is possible to use two separate inguinal and scrotal incisions,⁵ which may minimise morbidity, but would have made dissection very difficult in this case due to the local invasion of overlying fascia. Scrotal reconstruction was undertaken by excision of excess scrotal skin.

Figure 1 Tumour specimen

Figure 2 Microphotographs. Left: Low power image of tumour beneath the surface epidermis. Middle: Medium power image of the yolk sac tumour. Right: Medium power image of embryonal carcinoma showing vascular invasion.

Conclusions

It is very rare in the developed world, with comprehensive education and easy access to information, for patients to allow a tumour to grow to such a large size. Fear, shame and

Figure 3 Pre- and postoperative scrotum

embarrassment are the most likely reasons for avoiding seeking medical assistance,⁵ and certainly these were the reasons why this patient delayed presentation. Efforts should therefore be made to increase public awareness and promote health education among adolescents regarding the signs and symptoms of testicular tumours, and the importance of testicular self-examination.

References

1. Kin T, Kitsukawa S, Shishido T *et al.* [Two cases of giant testicular tumor with widespread extension to the spermatic cord: usefulness of upfront chemotherapy]. *Hinyokika Kiyo* 1999; **45**: 191–194.
2. Tzvetkov M, Venkov G, Vlahova A *et al.* Enormous Mixed Germ Cell Tumor of the Testis with Four Different Types of Tumors: Teratoma, Seminoma, Embryonal Cancer and Yolk Sac Tumor. *JCM* 2009; **2**: 36–42.
3. Al-Assiri M, Kevin Z, Binsaleh S *et al.* Surgical approach of giant testicular cancer. Case report and literature review. *Can J Urol* 2005; **12**: 2,557–2,559.
4. Jihad EJ, Mounir L, Mouad S *et al.* Primary Debulking Surgery for a Huge Abdominal Mass Revealing a Seminoma on a Cryptorchid Testicle. *WebmedCentral UROL* 2014; **5**: WMC004661.
5. Tomasković I, Sorić T, Trnski D *et al.* Giant testicular mixed germ cell tumor. a case report. *Med Princ Pract* 2004; **13**: 111–113.