

Case 122 Two examples of testicular tumours

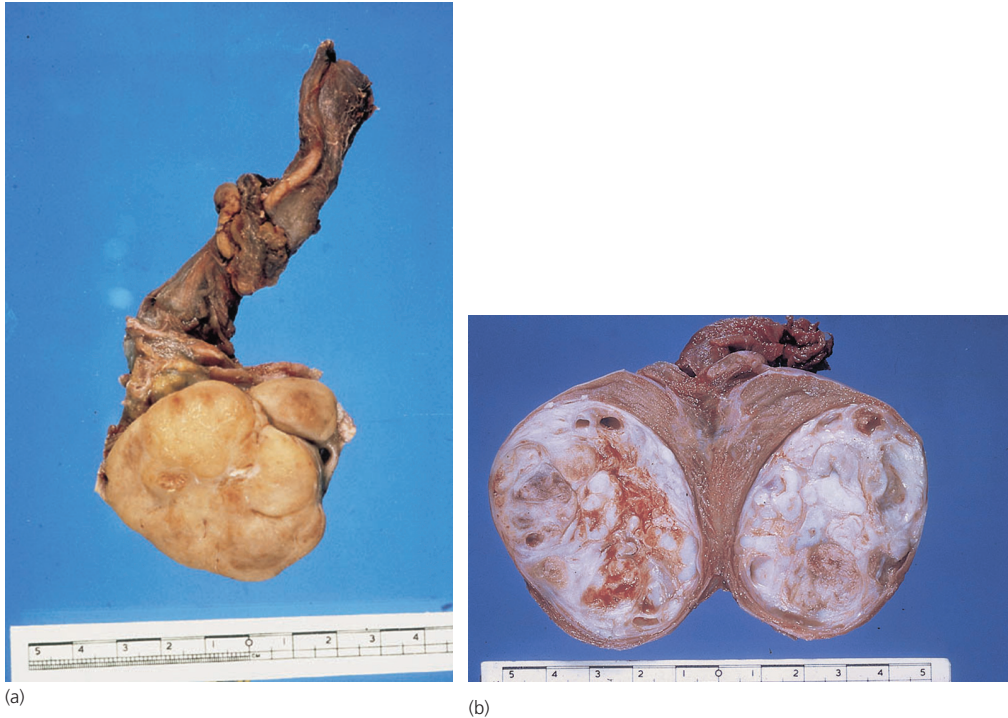


Figure 122.1

Figure 122.1 shows the cut surface of two testes, together with their spermatic cords, that were removed surgically. Figure 122.1a is from a man aged 37 years and Fig. 122.1b is from a student aged 17.

What is your diagnosis of the first tumour and what is its histological appearance?

Figure 122.1a has the typical appearance of a seminoma – rather like a cut potato. Histologically, it comprises sheets of cells, which may vary from well differentiated spermatocytes to undifferentiated round cells with clear cytoplasm. Some 10% arise in undescended tests (see Case 120, p. 247 and Fig. 120.3).

What is your diagnosis of the second specimen, and what is its microscopic appearance?

Figure 122.1b is a teratoma of the testis. It occurs usually in a younger age group, peaking at 20–30 years, in contrast to the age range of seminoma of 30–40 years. Macroscopically it usually has a cystic appearance, and areas of haemorrhage and infarction are common. Histologically, the appearance is very variable and the tumour may contain cartilage, bone, muscle, fat and other tissues. The rare variety of chorionepithelioma may contain syncytial tissue.



Figure 122.2 Lymph nodes in the left supraclavicular fossa.

What may be the local presenting features of a testicular tumour?

The tumour commonly presents as an enlarging painless mass in the testis. There is often an effusion of fluid into the tunica vaginalis, producing a secondary hydrocele, which may lead to misdiagnosis. The fluid in such a case is often blood-stained, unlike the clear yellow fluid of a primary hydrocele. Occasionally the tumour may manifest as a painful, rapidly enlarging swelling that is mistaken for an orchitis. Rarely a late case presents with the tumour ulcerating through the overlying scrotal skin.

Describe the pathways of dissemination of testicular tumours

Lymphatic spread is to the para-aortic lymph nodes via the lymphatics that accompany the testicular vein. Spread may then occur along the thoracic duct to the supraclavicular nodes, especially on the left side. Figure 122.2 is a photograph of a patient who presented with a hard, painless mass in the left testis who, on examination, had this obvious mass of hard, discrete lymph nodes in the left supraclavicular fossa.

Blood-borne spread from testicular teratoma occurs relatively early to the lungs and liver. In seminoma, this

spread tends to be later in the natural history of the disease.

Discuss tumour markers in testicular tumours

Teratomas of the testis usually produce α -fetoprotein and may also produce β -human gonadotrophin (β -hCG). Some seminomas also secrete β -hCG. These are of use in making a diagnosis, but are also valuable in subsequent follow-up and in diagnosis of occult recurrence of the tumour.

Outline the initial diagnostic approach and operative management. Why is orchidectomy not performed through the scrotum?

Suspected tumours are investigated by ultrasonography. If they are suspicious of tumour, or if doubt exists, they are explored through a groin incision, through which the testis is delivered. An atraumatic clamp is placed across the cord. If the diagnosis is clear then an immediate orchidectomy is performed; if doubt exists a frozen section is performed and, if tumour is confirmed, an orchidectomy performed. Orchidectomy is performed through an inguinal rather than a scrotal approach to avoid tumour exposure to scrotal skin and lymphatics (which drain to the inguinal nodes, unlike the cord which drains to the internal iliac nodes). If this were done, radiation to the scrotum may be required to avoid local recurrence, with inevitable consequences to the contralateral testis.

Outline the different adjuvant therapies for the different tumour types. What is the prognosis for a young man with a testicular tumour confined to the scrotum?

- Seminomas are highly radio-sensitive, such that following orchidectomy radiotherapy is given to the ipsilateral iliac and para-aortic nodes. Chemotherapy is indicated for more extensive disease.
- Teratomas are not as radio-sensitive, and are best treated by combination chemotherapy usually involving one of the platinum compounds (e.g. cisplatin or carboplatin).
- In the absence of nodal spread a 5-year survival of near 100% is common; even with nodal spread a 95% 5-year survival is achieved.