Testicular mass

Testicular mass in a resting cell
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Answers on p 742.

A 21 year old man was referred by his general practitioner for an ultrasound evaluation of bilateral testicular masses. The masses were insidious in onset, slow growing, and palpable. There were no other local signs. The patient was also under the care of an endocrinologist for congenital adrenal hyperplasia.

His current therapy included hormone replacement with oral steroids.

However the patient was non-compliant with regards to his medication. An ultrasound scan was performed as shown in figs 1 and 2.

QUESTIONS
(1) What does the ultrasound scan show?
(2) Given the patient’s history, what is the diagnosis?
(3) Describe the pathophysiology of these lesions?

Fracture in pregnancy

Pathological fracture in a pregnant woman

Answers on p 743.

A 27 year old woman presented in the third trimester of pregnancy with a history of gradually progressive pain in the upper end of her humerus. There was no significant medical history or any other associated illness. Magnetic resonance imaging (MRI) revealed a pathological fracture with extensive marrow replacement of the upper humerus and an associated large soft tissue mass in the upper arm (fig 1). A core needle biopsy documented benign giant cells. The patient was treated with excision and replacement with a prosthesis.

QUESTIONS
(1) What is the differential diagnosis based on the history and the MRI (giant cell tumour, brown tumour, chondrosarcoma, secondaries in the bone)?
(2) What other relevant blood investigation should be ordered in such patients (calcium, parathyroid hormone, alkaline phosphatase, acid phosphatase)?