

Diagnostic Images

Unilateral proptosis

Presented by L. Kreel

Department of Diagnostic Radiology and Organ Imaging, Chinese University of Hong Kong, Prince of Wales Hospital, Shatin, N.T., Hong Kong.

The patient

A male aged 19 presented with a protruding left eye increasing slowly for 3 years. On examination there was proptosis and downward displacement of the eye globe.

Investigation

Computed tomographic scan (CT) of the orbits; axial and coronal.

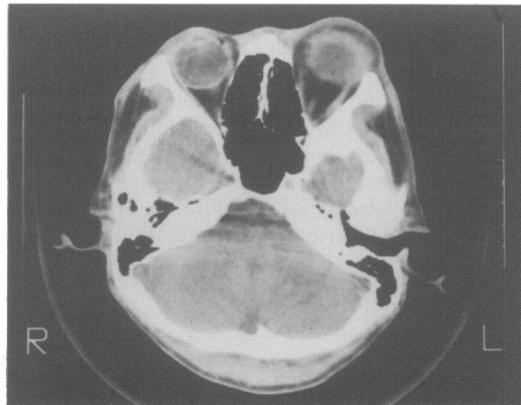


Figure 1 Axial scans demonstrate a left lateral soft tissue mass extending anteriorly and over the superior aspect of the globe with proptosis and thickening of the upper lid. The external rectus is slightly swollen and is continuous with the mass.

Comment

Unilateral proptosis can be due to thyroid ophthalmopathy causing muscle and/or adipose tissue enlargement or due to a mass lesion. Tumours may have an extra-orbital origin from the paranasal sinus, bone or intracranial contents especially meningioma. Intraorbital tumours are classified as intra- or extraconal or both intra- and extraconal. The most common intraconal mass is the pseudotumour adjacent to the sclera in Tenon's space. The central orbital space can produce a wide variety of tumours including optic nerve meningioma and glioma, neurofibroma, neurolemmoma, Schwannoma and optic nerve cysts, as well as lymphoma, haemangiopericytoma and the pseudotumour.

This tumour was shown to be a fibrous histiocytoma, an uncommon extraconal tumour. Extraconal lesions include various haemangiomas, leiomyoma, lymphoma, lacrimal gland tumours, dermoid, sarcoid and pseudotumour. The diagnosis of lacrimal gland tumours and non-haemangiomatous mass lesions depends by and large on the histologist, as in this case. Imaging is concerned with localization and distinguishing, vascular and adipose tumours, cysts and the presence of calcification.

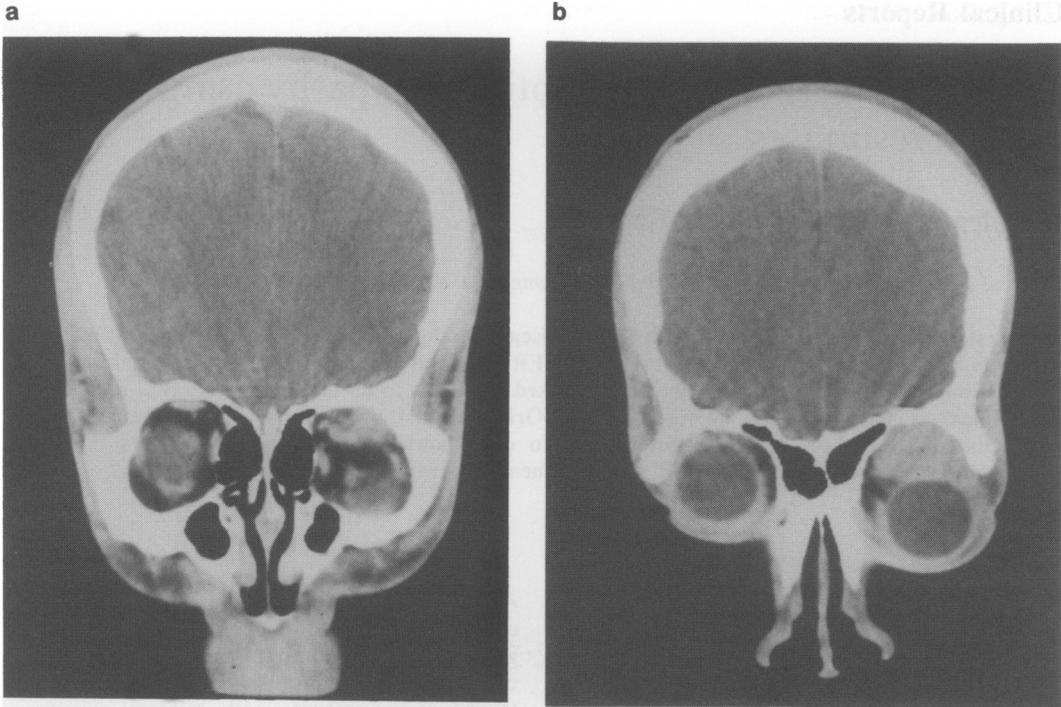


Figure 2 a,b The coronal scan shows the tumour and proptosis to better advantage. The mass is above the eyeball extending from the lateral to the medial orbital margins (in b) in the extraconal compartments (in a).

Acknowledgment

We would like to thank Media Services of the Chinese University of Hong Kong (Prince of Wales Hospital) for the illustrations and Ms Sanny Chan for secretarial services.

References

Mafee, M.F., Putterman, A. *et al.* Orbital space-occupying lesions. *Radiol Clin North Am* 1987, **25**: 529–559.