

Blunt injuries to the eye and orbit

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The floor of the orbit is its weakest wall and in blunt trauma, such as a blow from a fist, it is often fractured without fractures of the other walls. This is called a blow-out fracture. Clinical - signs are enophthalmos, bruising around the orbit, maxillary hypoaesthesia and limitation of upward gaze owing to entrap - ment of the inferior rectus muscle leading to vertical diplopia. This occurs when the extraocular muscles or orbital septa become trapped in the fracture and can be identified as a soft-tissue mass in the antrum on a radiograph (Figure 49.17 although CT scans or tomograms may be necessary . Surgical repair of the orbital floor with freeing of the trapped contents may be necessary if troublesome diplopia persists or enophthalmos is marked. A child with an orbital floor fracture requires urgent assessment, particularly if upgaze is restricted, as trapping of the inferior rectus muscle may cause ischaemia and require urgent surgery . If an orbital haemorrhage is too extensive to examine the eye, it may be necessary to examine the eye under anaesthesia because there may be a hidden perforation of the globe. Injuries to the lids and lid margins must be repaired; if the lacrimal canaliculi are damaged, they should be repaired if possible, especially the lower canaliculus, as 75% of tear drainage goes through it. Blunt injuries can also cause damage to the optic nerve, which can result in blindness and a total a ff erent nerve defect (Figures 49.18 and 49.19).

Figure 49.17 Radiograph showing a blow-out fracture of the orbit (left) with soft tissue in the antrum (arrow) (courtesy of Dr Glyn Lloyd). Figure 49.18 Injury from a ski pole into the right brow. Vision reduced to 'no perception of light' (courtesy of J Beare, FRCs).

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