

VENOUS INJURY

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Blunt or penetrating trauma almost always damages some small and medium-sized veins, which can be safely ignored or ligated without causing any problems. Larger axial veins should be repaired whenever possible to reduce subsequent morbidity (pain and swelling in the tissues being drained) and limb loss when associated with a concomitant arterial injury. Many venous injuries remain undiagnosed at the time of injury (e.g. crural vein damage associated with a fractured tibia) and only present many years later when post-thrombotic changes become apparent. Venous injuries occur from both civilian and military trauma but the incidence of venous military injuries has been particularly well documented. In total, 40-50% of arterial injuries have concomitant venous injuries, especially in the popliteal fossa. The mechanism may be laceration, contusion or avulsion (Figure 62.38). Iatrogenic injuries result from damage at the time of surgery and from punctures caused by catheter insertion. Thrombosis, haemorrhage and embolisation are all common complications and arteriovenous fistulae may develop when there is a local concomitant arterial injury. Associated injuries to soft tissue, arteries and bones often overshadow the venous injury. Massive haemorrhage from the pelvic bones or the inferior vena cava can rapidly lead to hypovolaemic shock and death if left untreated. Haematomas are common and engorgement, cyanosis and swelling are also indicative of a major venous injury.

(a) (b) Figure 62.37 Thoracic outlet syndrome: (a) cervical ribs on plain radiograph; (b) elevation of the arm causes occlusion of the axillary vein with collaterals. The patient has had previous surgery to decompress the left side (arrow in (a)).

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