Acute compartment syndrome

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Acute compartment syndrome occurs when there is increased interstitial pressure within a closed osteofascial compartment, which results in microvascular compromise. It is a surgical emergency as delayed treatment may lead to irreversible muscle ischaemia and signifi cant long-term morbidity . Compartment syndrome most commonly occurs after lower limb fractures, both open and closed (see Chapter 32). It also occurs in the upper limb, buttock and abdomen. Other causes include soft-tissue trauma, arterial injuries, burns and prolonged compression. It is characterised by pain out of pro - portion to the injury , particularly with passive movement of the a ff ected compartment muscles. Paraesthesia is another early sign. Absent pulses are uncommon and suggest the possibility of vascular injur y . Compartment syndrome is generally a clinical diagnosis. It can be di ffi cult to diagnose in the presence of impaired con - sciousness, in c hildren and in patients with regional nerve blocks. Monitoring intracompartment pressures (ICPs) can sometimes help to guide management. A pressure of ≤ 30 /uni00A0 mmHg between the diastolic pressure and ICP has been recommended as the threshold for fasciotomy . Fasciotomy involves incising the skin and deep fascia with long axial incisions (Figure 3.13). If the compartment pressure - was high, the muscle will then be seen bulging out through the fasciotomy opening. The lower limb is reliably decompressed via two incisions. A medial longitudinal incision 1–2 /uni00A0 cm poste -). rior to the medial border of the tibia decompresses the super - fi cial and deep posterior compartments. A lateral longitudinal incision 2 /uni00A0 cm lateral to the anterior tibial border decompresses the peroneal and anterior compartments. Late diagnosis of compartment syndrome is a management dilemma as a late fasciotomy may r esult in rhabdomyolysis, infection, need for amputation and even death.

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