

ACUTE COMPARTMENT SYNDROME

Acute compartment syndrome (ACS) of the lower limb is a potentially disruptive complication that must be recognized early and appropriate action taken to avoid multiple complications. It commonly occurs in closed fractures of the tibia shaft with a reported incidence of 1.2% to 30.4% (1) but has also been seen in open tibial fractures with reported incidence between 1.2% and 9.1% (2). To avoid complications early diagnosis and urgent decompression must be done.

Multiple complications have been reported such as infections, neurological deficit with sensory and power loss, delayed healing and non union of the fractures, deformities, and poor functional outcome. If ignored or misdiagnosed it leads to morbidity, irreversible muscle destruction, muscle fibrosis, contractures and permanent disability and at worst case scenario of amputation (3,4). As reported by Frink *et al* (3) on their study on acute compartment syndrome it can occur even when there is no fracture. Also general surgeons have reported acute compartment syndrome of the abdomen. The reported complications include infections which can be minor (Pintrac due to external fixators), superficial infections or major deep infections, osteomyelitis and septic arthritis (5). Fracture healing is also delayed or non union can occur.

The diagnosis of compartment syndrome is by clinical assessment and includes increased, swelling, blisters, increasing pain despite appropriate analgesics, pallor, poor pulse and decreased capillary return, parasthesia and a limb that is perishing with cold (The student's MNEMONIC 5ps of ACS). The clinical diagnosis can be confirmed by compartment pressure measurements (2,6,7) and the treatment is urgent decompression by fasciotomy.

Patients with compartment syndrome should be treated with utmost urgency, constant monitoring, and early decompression with appropriate stabilization of the fracture. They should also be informed about increased risk of above mentioned complications, prolonged inpatient care with increased financial burden and complications of cosmetic appearance. Poor functional outcome is also likely especially when there is late diagnosis. In conclusion, ACS is the equivalent

of acute abdomen and must be treated with the urgency it deserves.

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