



COMPARTMENT SYNDROME FOLLOWING ANKLE FRACTURE A RARE CASE REPORT PARVEES

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Abstract : Acute compartment syndrome of the lower extremity is a condition that requires immediate intervention. Failure or delay in reaching the diagnosis may lead to irreparable damage to muscle or nerve and, hence, poor long-term function. Compartment syndrome in association with ankle fractures is extremely rare. The few reported cases involved the deep posterior compartment and that too were diagnosed late. This case report stress on Ankle injury will lead to Compartment syndrome of leg and ankle , Also alarms that High index of suspicion is needed with head injury.

Keyword : compartment syndrome, ankle fracture, head injury
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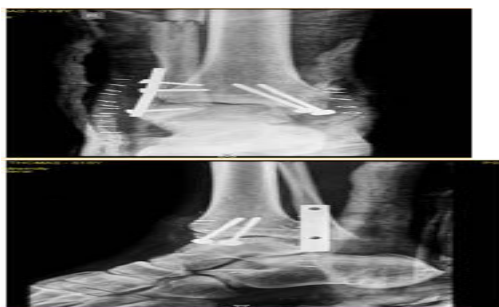
A RARE CASE REPORT Introduction: Compartment syndrome is commonly reported following tibial fractures and fore arm fractures. There are only a few case reports of compartment syndrome reported following ankle fracture. Timely diagnosis and treatment will avoid the devastating complications of compartment syndrome. Here we report a case of Compartment syndrome of leg and foot following bi malleolar fracture of Ankle. In this case the diagnosis was further made difficult because of associated head injury.

Case report: An 18 year old male was seen in emergency department following RTA. He presented with head injury and deformed ankle, suggestive of a bimalleolar ankle fracture. He was disoriented and had a Glasgow coma scale score of 11/15. Ankle examination showed bruises over the lateral and medial aspect and minimal swelling. Distal pulsations were felt. As a first aid ankle was immobilized in below knee posterior slab. CT-Brain showed a sub dural hemorrhage, for which an emergency decompressive craniotomy was done. Post operatively he was put on a ventilator. X ray of ankle revealed a bimalleolar fracture. On the third day it was noticed that he had an increased swelling in the leg, ankle and foot, with multiple skin blisters. Neurological status of the lower limb could not be assessed since he was on ventilator. Multiple stab incisions were made around the ankle to relieve the skin blisters and edema; ankle was stabilized with external fixator.

On day 4 when the patient was weaned out of the ventilator it was noticed that he had complete anesthesia on his sole and dorsum of the foot, incomplete paralysis of the foot and leg muscles. He was not in pain. On the seventh day the swelling had subsided and the ankle fracture was treated by open reduction and internal fixation. A retrospective diagnosis of compartment syndrome was made. patient had gradual improvement in neurological deficit over a period of 3 months



Images showing multiple blisters over the distal leg and managed with Ex fix



Xray right ankle PA and Lat: taken postoperatively after ORIF

Discussion:

Compartment syndrome of the leg is relatively common following distal femoral and tibial fractures. Here we report a rare case of compartment syndrome following an ankle fracture. The diagnosis was further complicated by the presence of an associated head injury. There are only a few case reports of compartment syndrome of leg and foot following ankle fractures. Adam m star et al reported an isolated anterior compartment syndrome following a bimalleolar ankle fracture (3). Joseph.j et al also reported compartment syndrome following an isolated ankle fracture (7). Seyehi A et al reported an unrecognized anterior compartment syndrome following ankle fracture surgery (9). Up on further review of the literature Ashworth and patel reported a case of compartment syndrome developed after closed reduction and cast application of an unstable bimalleolar ankle fracture with ankle dislocation (2).

Conclusion: This case reported because of its rare presentation. Compartment syndrome can also occur following ankle fracture and high degree of suspicion should be required to diagnose compartment syndrome following ankle fracture. In patients with head injury compartment pressure monitoring may be required to diagnose compartment syndrome.

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