

Surgical Release of Thigh Compartment Syndrome

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Background

Thigh compartment syndrome is a rare surgical emergency associated with a high risk of morbidity, with mortality rates as high as 47%. Without immediate surgical management, acute compartment syndrome of the thigh may lead to irreversible tissue ischemia and necrosis. Sparse literature is available on the management and outcomes of these injuries.

Purpose

This video demonstrates surgical release of thigh compartment syndrome which occurred secondary to a ballistic injury.

Methods

The anatomy, physical examination, diagnosis, and treatment options associated with thigh compartment syndrome are discussed. The case presentation of a 32-year-old man who sustained a ballistic, comminuted midshaft femur fracture is reviewed. To perform the fasciotomy, a lateral incision extending from the vastus ridge of the proximal femur to the lateral epicondyle of the distal femur, with subsequent incision of the iliotibial band, was used to directly decompress the anterior thigh compartment. Via this same incision, the lateral intermuscular membrane was incised along the length of the incision to directly release the posterior compartment.

Results

The postoperative clinical outcome was excellent, with the patient returning to regular activities by 6 months postoperatively.

Conclusion

Although this thigh compartment syndrome is uncommon and may result from various mechanisms of injury, physicians should maintain vigilance in evaluating patients who have sustained blunt force mechanisms of injury to the thigh.