

CASE REPORT

Acute Atraumatic Bilateral Compartment Syndrome In The leg

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Introduction

Compartment syndrome after trauma is a well recognised entity, atraumatic compartment syndrome is less widely known. This exercise induced syndrome, also known as 'march gangrene', which is usually unilateral can result in the loss of life or limb.

We report a case of acute, bilateral, exercise induced anterolateral leg compartment syndrome in a healthy young man.

Case report

A 25 year old army recruit presented to casualty complaining of severe, acute onset bilateral leg pain not responding to rest or analgesia. He was undergoing Technical Advance Training (TAB) as a part of a Combat Fitness Test (CFT) and towards the end of the drill he started feeling intense pain in his legs with inability to walk thereafter. He was in agony despite of receiving intravenous opiates. On examination his legs were grossly swollen and palpation of anterolateral aspect revealed exquisite tenderness to touch. Distal pulsation's were present. Passive stretching of the toes was painful and no active movement of the ankle or foot was possible. Hypoesthesia was present over the dorsolateral aspect of both feet. Radiographs of his legs were normal. A clinical diagnosis of acute bilateral compartment syndrome was made. Due to the clinical urgency of the condition immediate, bilateral, simultaneous decompressive fasciotomy were done. The underlying fascia was very thick on both sides. The muscles bulged instantaneously after dividing the fascia. The muscles were healthy, of normal colour and texture with evidence of bleeding on puncture. Avoiding undue tension on the skin primary closure was attempted. Post operatively his symptoms had disappeared and his neurology returned to normal in a week. His operative wound healed satisfactorily and the patient made an uneventful recovery.

Discussion

Compartment syndrome is a pathological condition characterised by vascular insult in a closed soft tissue compartment. Most of these cases are traumatic in origin. Very few acute, atraumatic, exercise induced compartment syndromes have been reported (1-6).

These atraumatic cases can very easily be overlooked and devastating complications such as severe permanent muscle atrophy,

loss of sensation or even amputation may result (7,11).

Compartment syndrome is a clinical diagnosis. In suspicious cases intra-compartmental pressure should be measured (10). Early recognition and prompt treatment by decompressive fasciotomy is of vital importance if limb function is to be preserved and complications are to be avoided (8,9).

In our case the patient was a fit army recruit undergoing training. Technical Advance training for Combat fitness involves walking fast most of the time (300 to 400 meters) and then break into a run for 100 meters. This training cycle of fast walking followed by short running continues for a total distance of 8 miles. During this whole exercise a weight of approximately 45 lbs is strapped to the back. The patient presented to us with classical features of compartment syndrome. On the basis of clinical findings urgent decompressive fasciotomies were done which avoided further complications.

An awareness of this entity, accurate clinical history and careful physical examination will lead to an early recognition and diagnosis of this condition and hence ensure prompt treatment.

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