COMPARTMENT SYNDROME OF THE ARM, CAUSED BY SMALL FOREIGN BODIES: A CASE REPORT
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Abstract

Compartment syndrome is a condition in which an increase in pressure within compartment could compromise circulation, resulting in tissue death.
Thomas in 1909 established this idea that extrinsic pressure is not only the cause of limb ischaemia but rather increase in intrinsic pressure could cause ischaemia of limb. Compartment syndrome of upper limb is not common.
A case of compartment syndrome in arm is reported by rather an unusual cause i.e., tiny foreign bodies. Severe and unrelenting pain should be considered a compartment syndrome until proven otherwise. Further more detailed clinical examination in medical practice is of great value despite trivial nature of disease.

Key Word: Compartment Syndrome : F. B: Vessel Injury.

Introduction

Acute compartment syndrome of a limb can occur as a result of progressive edema or bleeding, which increases intra compartmental pressure and decreases tissue perfusion. Common causes include fracture, blunt trauma, vascular injury etc. less common causes include excessive physical training, long-term surgery in lithotomic position. The diagnosis of compartment syndrome in the awaked patient is based on classic symptoms and physical findings. Pain out of proportion to the injury, tenderness with passive extension, and firm tender compartment are common findings. Though in the unconscious patient, high degree of suspicion and compartment pressure measurement may be the only indicator.

An impending or established compartment syndrome mandate immediate fasciotomy.

Case Report

45 yrs old laborer came to out patient with history of two small foreign bodies penetrating into the left cubital fossa during work four days back. He complained of severe pain and swelling of left elbow with burning sensation in thumb, index and middle finger. On examination there was marked bruising and swelling on medial and anterior side of left elbow and lower arm. Movements were not possible at elbow due to severe pain and swelling. Radial pulse was feebly palpable distally. Sensation was decreased over palmer aspect of thumb, index and middle finger. Pain was disproportionate to injury and non-responsive to chain of narcotics and non-narcotic analgesics. X-rays showed, fig. 1, two small foreign bodies, and one lying subcutaneously in upper for arm and the second deep in cubital fossa.

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This classical scenario predicted to provisional diagnosis of vascular injury causing compartment.

Left cubital fossa was explored, a large hematoma was drained and median nerve was relieved, part of nerve was yellow in appearance. Brachial artery was intact. One-centimeter hole found in cephalic vein which was repaired with 4/0 prolene, fig. 2. Foreign bodies were located with the help of image intensifier and removed.

Discussion

For better out come early diagnosis and treatment of acute compartment syndrome in necessary. In this case a delay of four days indicates that there is less awareness of the condition at primary care level. It is a dilemma that patient went to two hospitals and was discharge by them on the basis of two small foreign bodies seen on x-rays, without properly examining his left elbow and arm. Also no attention was paid to the degree of pain that was very high as compared to the small foreign bodies.

To avoid such grievous mistake, any severely tender limb with altered sensation and pain neither corresponding to cause nor responding to analgesia should alert the clinician and diagnosis of compartment syndrome should be considered.

References


