

## Closed Traumatic Extensor Muscle Rupture Of Right Forearm: A Case Report

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### INTRODUCTION:

A closed muscle rupture of forearm without external injuries is a rare case and usually misdiagnosed or has delayed in diagnosis especially in a patient who suffered from head injury. Anatomical knowledge and the pathophysiology of extensor muscles are essential for an accurate diagnosis of extensor muscle injury. With proper muscle repair technique and good rehabilitation programme, patient may regain full hand function.

### CASE REPORT:

We are reporting a case of 16 years old male who had been involved in a motor vehicle accident and sustained mild head injury. He complained of pain and swelling over his right forearm and was unable to extend all fingers except for his thumb. Examination revealed tenderness over extensor aspect of forearm with a palpable gap at the proximal part of the forearm. However, there was no wound seen. Otherwise sensation was intact. Plain radiograph showed soft tissue swelling at the forearm but no fracture seen. Ultrasound of right forearm showed mixed hypo and hyper echoic lesion of the extensor muscle of right forearm suggestive of muscle tear, haematoma of muscle oedema. He was then sent for exploration of forearm. Preoperatively we noted 4mm muscle gap (Figure 1.1). Intraoperatively we noted gross haematoma in between the subcutaneous tissue and muscle layer.



Figure 1.1: pre-operative assessment and external measurement of muscle gap



Figure 1.2: Intra-operative findings

The extensor digitorum muscles of the medial four fingers were totally ruptured. The muscles were severely contused and retracted proximally and distally with gap of about 12cm. There was also total cut of extensor digiti minimi muscle with total cut of abductor pollicis muscle. (Figure 1.2) All muscles were successfully repaired and his forearm was protected with thermoplastic splint. Serial follow up showed good hand function with minimal surgical scar.

### DISCUSSION:

The incidence of closed extensor muscle rupture is a rare presentation. It is also classified as zone 9 extensor tendon injury which involved muscle bellies. Usually the muscle rupture occurs at musculotendinous junction or at the tendon itself. However, all types of extensor tendon injury require surgical repair and proper rehabilitation programme to achieve good hand functions. Complication includes adhesion following tendon repair that can reduce joint mobility and impair finger function.

### CONCLUSION:

The incidence of extensor muscle rupture must be excluded even without external injury in a patient who presented with loss of hand extension function and require surgical repair for good outcome.

### REFERENCES:

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