

Simultaneous Closed Rupture Of Flexor Digitorum Profundus And Superficialis In Zone III With A Single-Stage Tendon Reconstruction: A Case Report And Review Outcome.

C.M. Hanif¹; Aziz Y²

¹ Orthopedic Department, Hospital Raja Perempuan Zainab II, Kelantan

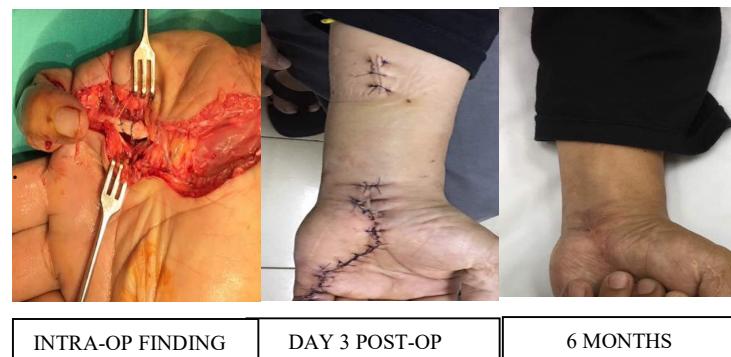
² Department Of Orthopedic, Hospital Seberang Jaya, Pulau Pinang.

INTRODUCTION

We are reporting a case of simultaneous closed rupture of Flexor Digitorum Profundus and Superficialis in zone III which is a rare case with a single stage tendon reconstruction.

CASE REPORT:

A healthy 48-year-old man sustained an axial trauma to his extended left little finger during his work. He presented to our orthopedic clinic 6 weeks after the injury. He complained of pain of his left palm and unable to flex his left little finger, clinically showed mild swelling of palmar area and no neurovascular deficits. Plain radiographic image did not show any fracture or underlying osseous pathology. A preoperative diagnosis of FDP avulsion from the distal phalanx was made, and the elective operation was carried out 15 days after injury. Surgical exploration via Bruner-type incision started in zone II and extended proximally into the distal palmar crease, but no stump was found in either location. Therefore, exploration was carried out to the mid-palmar region, revealing the FDP tendon was totally ruptured and contracted in zone III with retraction of proximal stump to the level of zone IV. FDS tendon was 50% cut then was repaired with 4/0 Polypropylene suture using modified Kessler technique. For FDP tendon, a single-stage tendon reconstruction was performed using a palmaris longus graft by end to end suture. Immobilization was carried out in a plaster of Paris back slab. Following 6 months of hand therapy, clinical examination revealed a full range of movement at the PIPJ and DIPJ of the little finger passively, with 10 degrees loss of active DIPJ flexion. By Jamar dynamometer, hand grip strength was 80% of the opposite hand.



DISCUSSIONS:

Patients who present in the first 3 weeks of injury can be treated by primary tendon repair, provided that the ruptured tendon ends are not significantly frayed or attenuated. For patients presenting more than 3 weeks after injury, interposition tendon grafts or tendon transfers are suitable options for ruptures in zone III. Distal interphalangeal joint arthrodesis is another alternative in specific cases where reconstruction is not possible. In this case, reconstruction with single free tendon graft was possible as the trauma was more than 3 weeks.

CONCLUSION:

Our preoperative diagnosis was Jersey finger of little finger, however intraoperatively revealed simultaneous closed rupture tendons in zone III which is extremely rare occurrence in the adult population.

REFERENCES:

Boyes JH, Wilson JN, Smith JW. Flexor-tendon ruptures in the forearm and hand.