Common mechanism of injury: A supracondylar fracture.

Motor deficit:

Loss of pronation of forearm, weakness in flexion of the hand at the wrist, loss of flexion of radial half of digits and thumb, loss of abduction and opposition of thumb.

Presence of an ape hand deformity when the hand is at rest, due to an hyperextension of index finger and thumb, and an adducted thumb.

Presence of benediction sign when attempting to form a fist, due to loss of flexion of radial half of digits.

Sensory deficit: Loss of sensation in lateral 3 1/2 digits including their nail beds, and the thenar area. At the elbow

Entrapment at the level of the elbow or the proximal forearm could be due to the pronator teres syndrome. Within the proximal forearm: Anterior interosseous syndrome

Injury to the anterior interosseous branch in the forearm causes the anterior interosseous syndrome. Common mechanisms: Tight cast, forearm bone fracture

Motor deficit: Loss of pronation of forearm, loss of flexion of radial half of digits and thumb. Sensory deficit: None

Case series

Eleven patients of mean age 30 years (SD \pm 14 years; 6 males, 5 females) were examined a mean of 21 weeks (SD \pm 16 weeks) after an isolated high median nerve injury. Pronation, wrist flexion, and finger flexion range of motion and strength (British Medical Research Council scale) were evaluated. Grasp and lateral pinch strength were assessed bilaterally using a dynamometer. Thumb opposition was evaluated using the Kapandji score. Sensory impairment was considered significant when there was no perception of a 2.0-g Semmes-Weinstein filament.

Pronation was largely preserved in all patients to a mean range of motion of 52° (SD \pm 13°), and pronation strength was M4 in 10 of 11 patients. Wrist flexion scored M5 in all patients. Thumb and index distal interphalangeal joint flexion were absent in all patients. In all patients, middle, ring, and little finger flexion was complete and scored M5. Thumb function scored above 5 in all patients, averaging 7.5 (SD \pm 1.2) on the Kapandji scale. Grasp and pinch strength were 43% (SD \pm 12%) and 36% (SD \pm 11%) of the contralateral (normal) limb, respectively. Impaired sensation of a 2.0-g monofilament was found only in the palmar region over the middle and distal phalanges of the index and middle fingers and the distal phalanx of the thumb.

Noteworthy discrepancies were identified between the clinical motor and sensory deficits described in the literature and those observed in our patients.

In most patients with a high median nerve injury, only thumb and index flexion and palmar sensation warrant surgical reconstruction. Decreased grasp and pinch strength was a major finding that should also be addressed by surgery ¹⁾.

1)

Bertelli JA, Soldado F, Lehn VL, Ghizoni MF. Reappraisal of Clinical Deficits Following High Median

Nerve Injuries. J Hand Surg Am. 2016 Jan;41(1):13-9. doi: 10.1016/j.jhsa.2015.10.022. PubMed PMID: 26710729.

From: https://neurosurgerywiki.com/wiki/ - **Neurosurgery Wiki**

Permanent link: https://neurosurgerywiki.com/wiki/doku.php?id=high_median_nerve_injury



Last update: 2024/06/07 02:52