

REPAIR OF DISTAL BICEPS TENDON INJURIES

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OBJECTIVES

- Biceps distal tendon lesions are relatively infrequent and generally affect the dominant limb of middle-aged males. The trauma mechanism is a sudden extension force exerted on a flexed elbow
- The surgical technique is performed by a single or double incision with variants in the re-insertion in the tuberosity of the radio
- Chronic lesion remains a challenge for the surgeon, who can proceed either through direct repair of the tendon to radial tuberosity, or through the use of tendon grafts to regain length, or by a thenodesis of the biceps tendon to the brachialis tendon

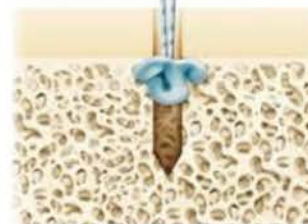
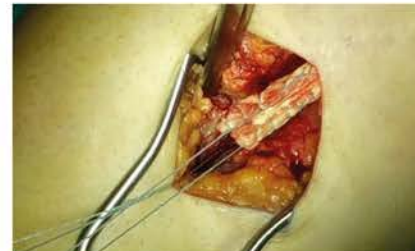


METHODS

- This is a retrospective case series study. From November 2004 to November 2014, 24 patients with distal biceps tendon injuries were surgically treated : 23 males and 1 female, mean aged 51 years (min 32 to max 82). In 20 cases the cause was an overload trauma (weight lifting) and in four cases a trauma in distraction (abrupt elbow extension). 5 cases occurred during sporting activities, 7 at work
- The diagnosis was always based on clinical examination (hook test), although in all cases ultrasound and / or magnetic resonance imaging were performed. The mean time from trauma to surgical treatment was 37 days (min 8 to max 124): 11 cases were operated on within 21 days of trauma, 12 over 30 days, 1 between 21 and 30 days
- The surgical technique used was a single incision with the reinsertion of the tendon by bone anchors in all cases. Tendon grafts have not been used in any case. In the postoperative period, an immobilization at 90° of flexion and intermediate pronosupination was applied for 2 weeks. This period has been followed by the beginning of rehabilitation with a range of motion allowed between 70 and 120°. The splint was removed at 6 weeks and no efforts were allowed for 1 month

RESULTS

- The average follow-up was 41.7 months (min 7 to max 127). The outcome measures were recorded at 6 months according to : range of elbow motion, flexion and supination strenght
- The degree of patient satisfaction was assessed as excellent, good, sufficient and poor by assigning a score to the time of return to working, or to sporting or daily activities : excellent (20); Good (3); Sufficient (1)
- Complications: entrapment of the lateral cutaneous nerve of the forearm (1), neuroapraxia of the posterior interosseus nerve (1), transient hypoparesthesia in the area of the superficial radial nerve (5)



CONCLUSIONS

- The distal biceps tendon rupture reduces the patient's ability to use the upper limb and the surgical repair is the effective treatment to restore the function, both in the case of acute and chronic lesions
- The diagnosis of the lesion is primarily clinical and is based on the clinical history, the evaluation of reduction of flexion and supination strenght and the hook test, which has high sensitivity and specificity
- The imaging plays a limited role in the diagnosis. The analysis of our cases is in agreement with this data and focused on repairing chronic lesions without tendon grafts

