



Long Term Outcome of Surgical Treatment of Radial Tunnel Syndrome in 223 patients

Steven B. Carr, MD*

Nash H Naam, MD**

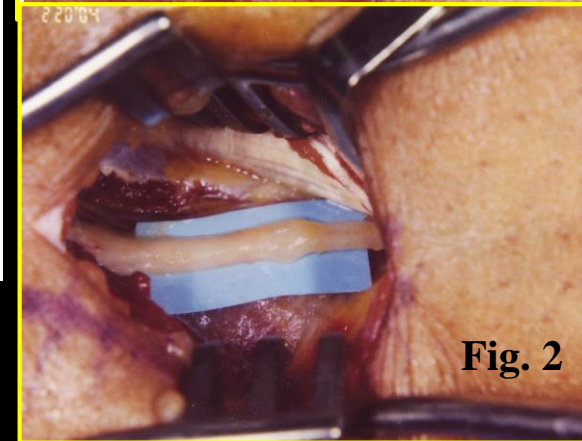
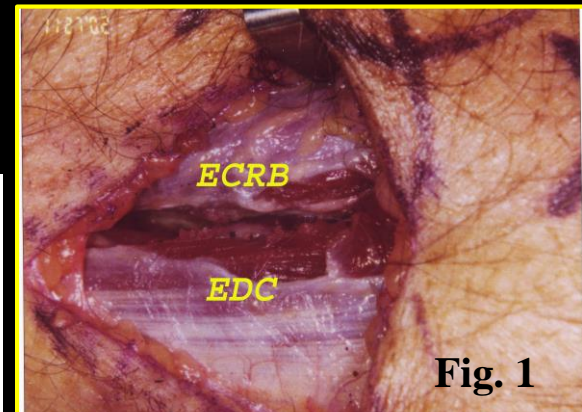
Abdel Hakim A. Massoud, MD***

*University of Colorado Health Sciences Center, Denver, Colorado, **Southern Illinois University, Effingham, Illinois, *** Al Azhar University, Cairo, Egypt

Introduction

Methods

Results



Conclusion

- Proper diagnosis and management of patients with RTS are associated with good functional outcome.
- Worker's compensation patients had slightly less favorable results, but not to a significant degree.
- Associated Lateral epicondylitis had a negative effect on long term outcome.

Radial tunnel syndrome (RTS) is a pain syndrome due to entrapment of the posterior interosseous nerve (PIN) at the proximal forearm. In this study we analyze the long term outcome of its surgical treatment in 223 patients.

- Between 1990 and 2012, 269 patients were surgically treated for RTS. 223 patients were available for review.
- 94 males and 129 females, with an average age of 43 years.
- Symptoms lasted an average of 9 months. History of trauma was present in 67 patients.
- 162 patients were worker's compensation patients.
- Electrodiagnostic studies were obtained in all patients. The studies were positive in 36 patients (16%).
- Patients were treated conservatively for an average of 3½ months.
- Surgery was performed using a dorsal approach under regional block anesthesia. The PIN was exposed between the extensor carpi radialis brevis (ECRB) and the extensor digitorum communis (EDC) (Fig. 1&2). The anterior approach was used in 3 recurrent cases.
- Postoperative follow-up averaged 9 years (2-22 years).

- At the last follow-up, 162 patients had no pain (73%). 36 had minimal pain (16%), 18 had moderate of pain (8%) and seven had persistent pain (3%) (Table 1).
- Five underwent re-exploration.
- Two patients continued to have persistent pain.
- The grip and pinch strength averaged 98% and 99% of the contralateral side respectively.
- Of the 162 worker's compensation patients, 157 returned to their regular work activities, four returned to modified work activities, and one changed his job. All non-worker's compensation patients resumed their normal daily activities.
- Patients classified their outcome as excellent in 78%, good 11%, fair 8% and poor 3%.
- There was no statistical difference in the outcome according to age, gender, duration of symptoms or any other associated condition except lateral epicondylitis ($p < 0.05$).

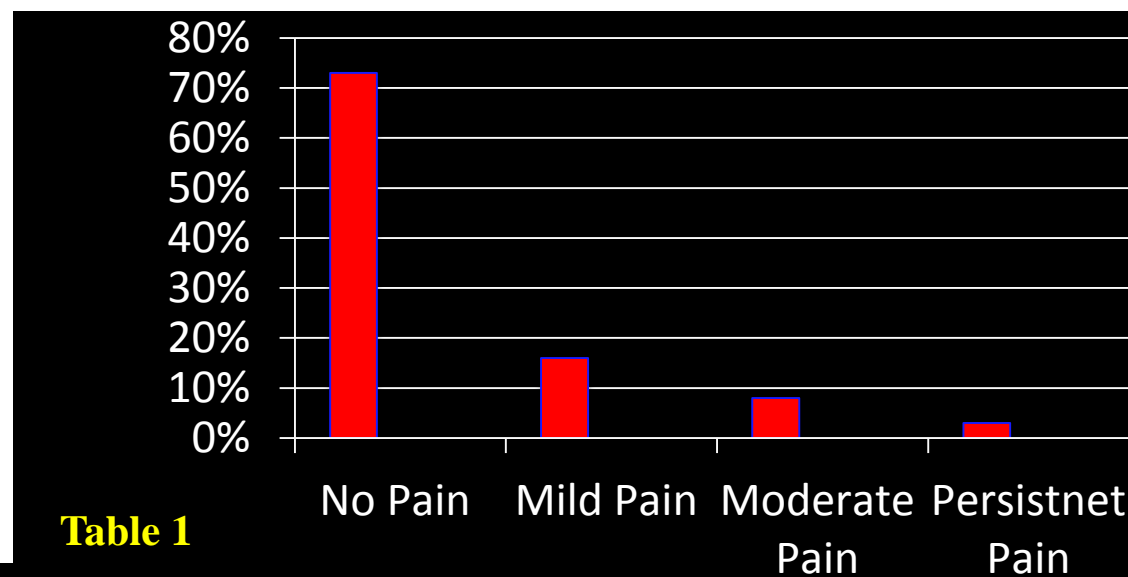


Table 1