Comparative study on percutaneous and mini-open CTRs in idiopathic carpal tunnel syndrome

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Introduction
- Carpal tunnel syndrome is one of the most common clinical problems hand surgeon encounters.
- In recent days, mini-open techniques (limited longitudinal incision techniques) have been popular method to release carpal tunnel.
- We have developed a simple, but innovative method of CTR through a small transverse incision at wrist crease (percutaneous release)

The purpose of study: to compare the results of percutaneous (our method) and mini-open carpal tunnel releases among patients with primary idiopathic carpal tunnel syndrome

Materials and methods
- We performed a comparative prospective study on two different methods of carpal tunnel release in 60 wrists of 46 patients during March, 2016 to Feb, 2017.
- Thirty-one wrists underwent percutaneous carpal tunnel release using hook knife, and 29 wrists underwent mini-open release.
- Percutaneous releases were performed through a small transverse incision just proximal to wrist crease using a curved hemostat and a hook knife under local infiltration of lidocaine at day surgery center.

Results
- All except 2 cases (29/31, 93.5%) of percutaneous carpal tunnel release and all but for 2 cases (27/29, 93.1%) of mini-open release patients showed complete symptomatic resolution and were satisfied with the final result (p>0.05).
- Among 4 wrists in 3 patients with unresolved symptoms, one had a overlapping thoracic outlet syndrome (bilateral), one had RDS (in mini-open group), and the last one had DM polyneuropathy (percutaneous group).
- Twelve patients among 14 patients who underwent bilateral carpal tunnel release (one wrist with percutaneous method and the other wrist with mini-open) preferred percutaneous method due to less scar and pillar pain.

Conclusion
- Compared to mini-open method, our percutaneous carpal tunnel release is a preferable method with less postoperative pain and good functional outcome without incomplete release or any serious neurovascular complication.