

# EVALUATION OF CARPAL TUNNEL PRESSURE IN SUPRARETINACULAR ENDOSCOPIC CARPAL TUNNEL RELEASE COMPARED TO CONVENTIONAL ENDOSCOPY CARPAL TUNNEL RELEASE: A CADAVERIC STUDY

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**Introduction:** Supraretinacular Endoscopic Carpal Tunnel Release (SRECTR) technique has been shown to be safe and effective in a clinical series. This study was designed to evaluate the differences in carpal tunnel pressure during the procedure of SRECTR with 2-portal Endoscopic Carpal Tunnel Release (ECTR).

**Methodology:** A total of 18 wrists from 9 cadavers (left wrists- 9; right wrists- 9) were examined in this cadaveric study. All surgeries were performed by a single surgeon in 2018 within mortuary of a tertiary university hospital. Intracarpal pressure was measured using Spiegelberg intracranial pressure monitoring device. Each wrist has undergone both SRECTR and ECTR technique. Intracarpal pressure pre-, intra-, post-procedure in each SRECTR and ECTR technique were documented.

**Discussion:** We used student T test for data analysis with SPSS software. SRECTR showed significantly lower intra-carpal pressure compared to ECTR in all steps of procedure (P value <0.05).

**Conclusion:** The new SRECTR technique has been shown to exert lower intra-carpal pressure compared to existing ECTR technique in this cadaveric study. Theoretically, lower peak intra-carpal pressure confers to a lower risk of median nerve injury during CTR in an already stenosed carpal tunnel.