Control Number: 18-A-38-EVS

Average Score: 3.625

Topic 1: F - Venous Disease

Title: Infraclavicular Thoracic Outlet Decompression Is Superior To Supraclavicular Thoracic Outlet Decompression For The Management Of Venous Thoracic Outlet Syndrome

Abstract Body:

Objectives: The usual treatment of venous thoracic outlet syndrome (VTOS) requires surgical decompression often combined with catheter-directed thrombolysis and venoplasty. Surgical options include transaxillary, supraclavicular and infraclavicular approaches to first rib resection, but the optimal method has yet to be defined. The purpose of this study was to compare the outcomes of patients who underwent infraclavicular versus supraclavicular surgical decompression for VTOS.

Methods: A retrospective review was performed of patients who underwent surgical management for VTOS from December 2010 to November 2017. During the study period, supraclavicular and infraclavicular approaches were chosen by different surgeons according to their preference. We analyzed the demographics, interventions, perioperative and postoperative outcomes for each group of patients.

Results: Thirty patients underwent surgical management of VTOS, of which, 15 (50%) underwent infraclavicular decompression and 15 (50%) underwent supraclavicular decompression. The mean age was 32.1 ± 13.6 years and 80% were male. 86.7% of patients presented with thrombotic VTOS and acute axillosubclavian vein thrombosis was present in 76.9% of these patients. Subacute or chronic thrombosis was encountered in the remaining 23%. Pre-operative thrombolysis was utilized in 7 (46.7%) and 6 (40%), (p=1.00) of the infraclavicular and supraclavicular patients, respectively. Initial post-decompression venogram, prior to any endovascular intervention, demonstrated a residual axillosubclavian vein stenosis of greater than 50% in 42.9% of patients in the infraclavicular decompression group and 70% (p=0.2397) of patients in the supraclavicular decompression group. Crossing the stenosis after surgical decompression was more easily accomplished in the infraclavicular group, 14 (100%) vs. 5 (55%), (p=0.0142). Following endovascular venoplasty, calculated residual stenosis greater than 50% was found in 0% and 33% (p=0.0474) of patients in the infraclavicular and supraclavicular approaches, respectively. Infraclavicular thoracic outlet decompression was associated with fewer post-operative symptoms, 0 (0%) vs. 8 (53.3%), (p=0.0022) and infraclavicular thoracic outlet decompression demonstrated superior patency, 15 (100%) vs. 8 (66.7%), (p=0.0282). Additionally, there was a trend towards fewer re-interventions in the infraclavicular group, 0.27 ± 0.8 vs. 0.87 ± 1.5, (p=0.1984). Mean combined follow-up was 8.47 ± 10.8 months.

Conclusions: Infraclavicular thoracic outlet decompression for the surgical management of VTOS was associated with fewer post-operative symptoms and superior axillosubclavian vein patency compared to the supraclavicular approach. Prospective analysis is warranted to determine long-term outcomes following infraclavicular decompression.

---PAGEBREAK---