Venous Thoracic Outlet Syndrome: Is Emergent Treatment Necessary?: A Single-Institution Retrospective Cohort Analysis.

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Background

- The timing of surgical rib resection for venous thoracic outlet syndrome (TOS) has been heavily debated in the literature.
- Some studies report no benefit to emergent surgery while others report benefit

Objective

- Our objective was to analyze cases of TOS and compare outcomes in patients presenting at various time intervals after diagnosis to determine whether the timing of treatment had effects on subclavian and axillary vein patency.

Methods

- Patients were divided into 2 groups based on the time from initial diagnosis to surgical rib resection. This variable was called time to surgery (TTS). The first group was patients whose TTS was < 15 and Group 2 was patients whose TTS was >15 days.
- Subclavian and axillary vein patency was analyzed at 3- and 6-months post-op. A two-sample t-test was used to measure significance of difference in outcomes between groups.

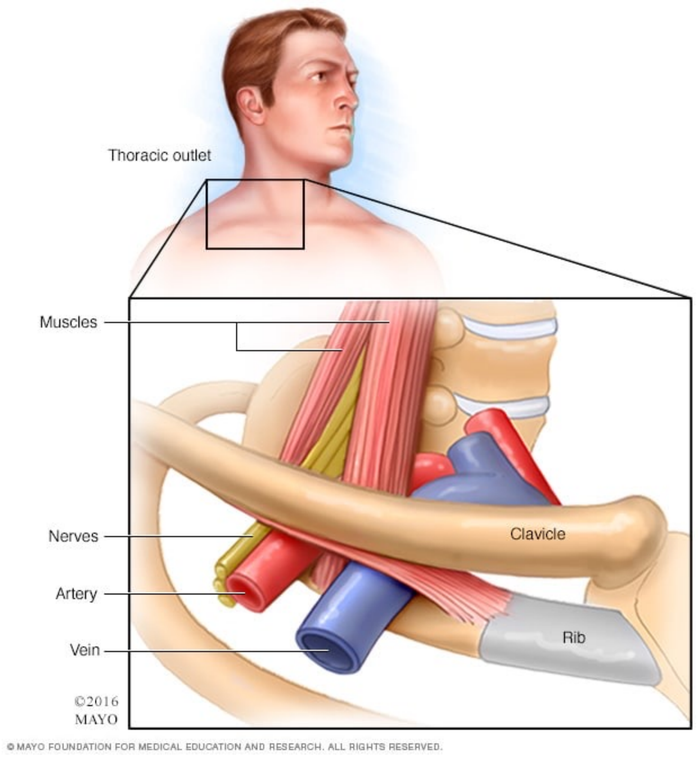

Figure 1: Thoracic Outlet

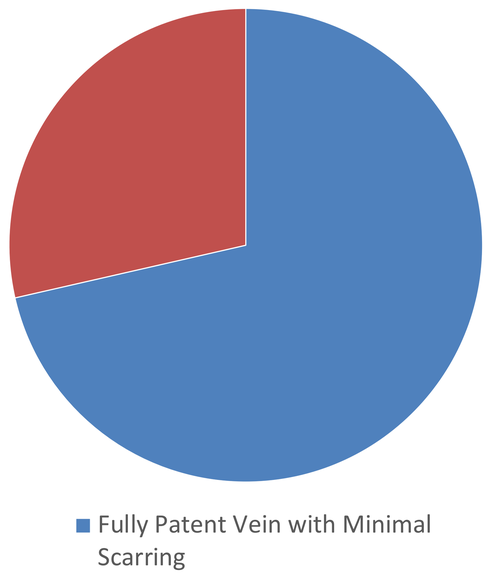

Figure 2: Vein Patency at 3 & 6 Months in Group 1

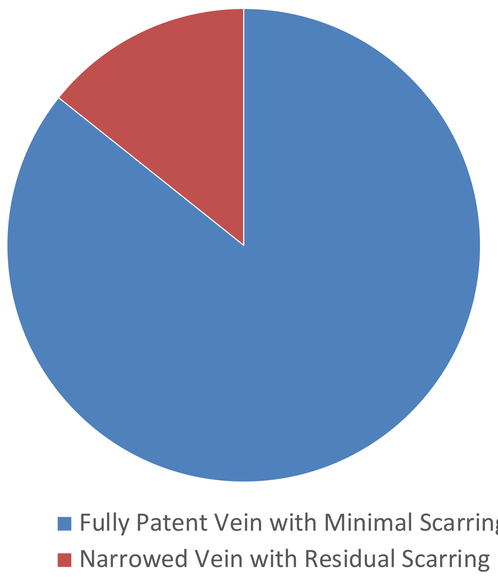

Figure 3: Vein Patency at 3 & 6 Months in Group 2

Results

- Fourteen patients met the inclusion criteria for our study from 2017-2022. Of those 14 patients, 7 (50%) had a TTS of < 15 days (group 1) and 7 (50%) had a TTS of >15 days (Group 2). The average TTS for groups 1 and 2 were 9 days and 296 days, respectively.
- 5/7 patients (71%) in Group 1 had fully patent vein with minimal residual scarring at 3 and 6 months and 2/7 (29%) had residual scarring with narrowed vein. Group 2 had 6/7 patients (86%) with fully patent vein and 1 patient (14%) present with re-occlusion at 3 months with unsuccessful re-intervention and residual chronic occlusion managed on anticoagulation (p=.3). All patients in Group 1 were inpatient admissions while 3/7 (43%) patients in group 2 were outpatient referrals.

Conclusion

- There is no significant difference in venous patency outcome in patients who receive immediate surgical intervention versus those that receive elective outpatient surgical intervention. Therefore, surgical intervention for Venous TOS should be done electively at the convenience of the patient.