New Developments In The Treatment Of Venous Thoracic Outlet Syndrome

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Disclosures
None.

What’s new?
Technical approach to transaxillary first rib resection (FRR), including use of a 30° laparoscopic camera to better visualize the anatomic structures.

Update on results at Penn.

Controversies:
- Surgical approach
- Postop anticoagulation

Penn experience: treatment algorithm
Between 2007 and 2018, 125 transaxillary FRR procedures were performed for vTOS.

All patients underwent diagnostic venography and – if indicated – percutaneous intervention prior to FRR.

If the vein could not be crossed and opened endovascularly then the patient was not offered FRR.

Patients only underwent postoperative endovascular intervention if symptoms recurred or if duplex demonstrated significant clot burden or persistent stenosis or occlusion.

Case
Case

Case

Case

Case

Penn experience: results
FRR performed between 4 days & 18 years after their initial symptoms.
23 patients required postoperative endovascular reintervention.
No operative venous reconstruction or bypass was performed.
Last follow-up was at 1-89 months (median, 8 months) after FRR.
123 of 125 axillosubclavian veins were patent by duplex (98.4%).

Controversies

Challenges include: “...the type and extent of surgical treatment needed to achieve optimal long-term functional outcomes, and the need for adjunctive treatments such as chronic anticoagulation.”

Controversies: Surgical Approach
Controversies: postoperative anticoagulation?

Rationale:
- 1 instance of hemothorax postoperatively requiring chest tube and VATS.
- 2 instances of axillary bleeding requiring reexploration and washout of axilla.

More recently, 39 patients have been discharged with only oral antiplatelet therapy, with no plans for postoperative therapeutic anticoagulation.

Contraindicated in some cases:
- Preoperative or perioperative PE
- Concern for hypercoagulability
- Hematology insistence
- Postop thrombosis of the vein

Penn approach to vTOS

Standard preoperative venography and intervention as needed, followed by transaxillary FRR.

Excellent results: 98% patency at last follow-up in both acute and chronic presentations, and no need for venous reconstruction.

Cosmetically advantageous.

Surgical venous reconstruction was not required in any case.

Use of a 30° laparoscopic camera can improve intraoperative visualization and video recording.

Currently, less insistence on postoperative anticoagulation.

Thanks.