

Results: During the 10-year period, 25642 TOS operations were reported (96.7% neurogenic, 2.8% venous, 0.5% arterial) with annual case volume remaining relatively stable (range 1568-3740, median 2524 operations). Operations were most commonly performed by vascular (52.8%), thoracic (19.7%), neurologic (7.2%), and orthopedic (6.1%) surgeons, and mostly in teaching hospitals (75%). Compared to venous TOS patients, neurogenic patients were slightly older (30-39yrs vs. 20-29yrs, $p<.0001$), more likely to be female (68.6% vs. 38.4%, $p<.0001$), and had shorter hospital stays (2.7 days vs. 6.7 days, $p<.0001$). Mortality was higher in venous TOS than neurogenic TOS (1.4% vs. 0.04%, $p<0.001$), although complications including pneumothorax (3.2%), vessel injury (2.7%), bleeding (2.6%), nerve injury (0.5%), and seromas (0.1%) were similar between groups. High-volume centers (>15 cases/year) had lower complication rates than low-volume centers (OR=0.43, $p=.0007$), but overall complication rates were no different between teaching (8.0%) and non-teaching (8.8%) hospitals.

Conclusions: Approximately 2500 TOS operations are performed annually in the United States, with the majority done for neurogenic etiologies. These cases are mostly done by vascular surgeons in teaching hospitals, and overall complication rates are lower in high-volume centers.

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S6: SVS Plenary Session VI

SS28.

Randomized Controlled Trial Examining the Timing of Carotid Endarterectomy in Patients with Asymptomatic Carotid Stenosis Undergoing Coronary Artery Bypass Grafting

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Objectives: Evaluate the timing of carotid endarterectomy (CEA) in the prevention of stroke in patients having an asymptomatic carotid stenosis $> 70\%$ and receiving a coronary artery bypass graft (CABG).

Methods: From January 2004 to December 2009, 185 patients candidate to CABG, having a unilateral asymptomatic carotid artery stenosis $> 70\%$, were randomized in 2 groups. In group A, 94 patients received a CABG with either previous or simultaneous CEA. In group B, 91 patients underwent CABG followed by CEA. All the patients had a preoperative helical CT-scan excluding significant atheroma of the thoracic aorta. Baseline characteristics of the patients, type of coronary arteries lesions, preoperative myocardial function, were comparable in the two groups. In group A, all patients

underwent CEA under general anesthesia with the systematic use of a carotid shunt. In this group, 79 patients had a combined procedure, and 15 underwent CEA a few days before CABG. In Group B all patients underwent CEA within 3 months after CABG.

Results: Two patients died in the postoperative period of cardiac failure, one in each group. Operative mortality was 1.0% in group A, and 1.1% in group B ($p = 0.98$). No stroke occurred in group A vs. 7 ipsilateral ischemic strokes in group B including 3 immediate postoperative strokes and 4 late strokes at 39, 50, 58 and 66 days after CABG. These late strokes occurred in patients for whom CEA was delayed due to an incomplete sternal wound healing or for completion of a cardiac rehabilitation program. The 90-day stroke and death rate was 1.0% (1/94) in group A, and 8.8% (8/91) in group B ($p = .01$, odds ratio:0.11[95% CI:0.01-0.91]). Logistic regression analysis showed that only delayed CEA ($p=.03$) and duration of cardiopulmonary bypass ($p=.004$) are associated with a higher risk of stroke and death.

Conclusions: This study suggests that previous or simultaneous carotid revascularization in patients with unilateral, asymptomatic carotid stenosis may reduce the rate of death and stroke after CABG.

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VS6.

Video Presentation

Open Repair of a Large Symptomatic Internal Carotid Aneurysm Extending to the Styloid Process Utilizing a Saphenous Vein Interposition Graft

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Background: Patients with symptomatic internal carotid artery (ICA) aneurysms extending to near the base of the skull are unusual. Those for whom endovascular treatment is not feasible can pose technical problems for the vascular surgeon. This video demonstrates the feasibility of saphenous vein interposition grafting as an effective surgical treatment option for such a patient. The approach was facilitated by a combined approach with Vascular Surgery and Otolaryngology.

A 71-year old hypertensive woman with rheumatoid arthritis presented with right facial weakness, dysesthesia and difficulty speaking which resolved in a few hours. Physical examination demonstrated no focal neurologic deficit. MRI scanning revealed a small right front-temporal infarct and ultrasonography suggested a large right ICA aneurysm. CT angiography confirmed the aneurysm extending from the ICA origin to the styloid process. Endoscopy verified normal true vocal cord mobility and a mass displacing the right pharyngeal wall to the midline. An endovascular approach was thought to be inad-