Long-Term Outcomes After Endothoracic Sympathetic Block at the T4 Ganglion for Upper Limb Hyperhidrosis


Conclusions: T4 endothoracic sympathetic clip application is effective and safe for treatment of patients with upper limb hyperhidrosis, particularly for those with isolated palmar hyperhidrosis but also to a lesser extent for those with combined palmar and axillary hyperhidrosis.

Summary: Endothoracic sympathetic block has been established as an effective and safe therapeutic option for patients with primary upper extremity hyperhidrosis. The major drawback, however, is compensatory sweating. Limited intervention at the fourth thoracic ganglion (T4) should result in lower levels of compensatory sweating in patients treated for upper limb hyperhidrosis. Preservation of inhibitory reflex mechanisms above T4 and below T4 inhibits increased sweating from other body regions (Lin CC et al, Ann Chir Gynaecol 2001;90:161-6). In this study, the authors sought to evaluate long-term outcomes of endothoracic sympathetic block at T4 (EST4). Special emphasis was placed on evaluation of disease-specific quality of life (QoL) through review of a prospectively accumulated database. This was a retrospective study conducted at a university hospital where patients treated with EST4 for palmar or palmoaxillary hyperhidrosis between 2001 and 2008 were evaluated. Questionnaires were developed by Keller and Milanez de Campos to evaluate disease-specific QoL. There were 374 EST4 procedures performed in 189 patients. Of 174 evaluated patients, 54 (31.0%) had palmar and 120 (69.0%) had palmoaxillary hyperhidrosis. Median follow-up was 92 months. EST4 successfully reduced hyperhidrosis in both groups (P < .001) and improved QoL (P < .001). Improvement was maintained stable after 5 years. However, the overall satisfaction rate did not decrease secondary to the development of compensatory sweating and recurrence during follow-up. Compensatory sweating affected 41 patients (23.6%) and was severe in 11 of the 163 patients (6.7%) with 5-year follow-up. Severity of compensatory sweating did not further worsen with time, but occurrence of severe hyperhidrosis increased to 11% at the end of follow-up. Severe compensatory sweating was twice as common in patients treated for palmoaxillary sweating than those treated for palmar sweating (13.2% vs 6.1%).

Comment: The most irritating side effect after upper extremity sympathetic block is compensatory sweating. In such cases, sweating is activated by stressors such as physical examination, heat, and psychologic stress. However, no patient in this study apparently considered the compensatory sweating, even when “severe” to be intolerable. Although there are other therapies for severe hyperhidrosis, such as botulinum toxin injections and axillary sweat gland aspiration, overall endoscopic sympathectomy at T4 seems to result in both favorable and durable clinical outcomes, particularly for patients with palmar hyperhidrosis, but to a lesser extent, for those with combined palmar and axillary hyperhidrosis.

Predicting Aortic Complications After Endovascular Aneurysm Repair


Comment: A risk score using commonly available morphologic data stratifies the rate of complications after endovascular aneurysm repair (EVAR).

Summary: Lifelong surveillance is recommended as standard of care after EVAR (Moll FL et al, Eur J Vasc Endovasc Surg 2011;41:S1-58). There is, however, no consensus on optimal surveillance protocols after EVAR. Optimizing surveillance is a priority because surveillance protocols may influence the long-term cost-effectiveness of EVAR and have obvious clinical importance (Chambers D et al, Health Technol Assess 2009;13:1-189). It also appears the risk of endograft failure after EVAR is not equally distributed among all patients, and there may be a minority of patients at greater risk of complications. This increased risk of complications appears to be defined by aneurysm morphology rather than by physiology or patient comorbidity (Patterson BO et al, J Vasc Surg 2010;52:25-30). In this study, the authors sought to determine which morphologic features predict the development of aortic complications after EVAR and to develop and validate a predictive risk score for aortic complications after EVAR. The study involved patients undergoing EVAR at two centers from 2004 to 2010. Preoperative aneurysm morphology was quantified using three-dimensional computed tomography scanning according to a validated protocol. Morphology was determined by investigators blinded to outcomes. Proportional hazards models were used to identify factors predicting aortic complications at the first center, and a risk score was then developed. A score between risk quartiles dichotomized patients to low-risk or high-risk groups. Aortic complications were reported by Kaplan-Meier analysis, and risk groups were compared by log-rank test. External validation was by comparison of aortic complications between risk groups at the second center. There were 761 patients with a median age of 75 years who underwent EVAR. Median follow-up was 36 months (range, 11-94 months). Physiologic variables were not associated with aortic complications. A morphologic risk score incorporating maximum aneurysm diameter (P < .001) and the largest common iliac diameter measured 10 mm from the internal iliac origin (P = .004) allocated 75% of patients to a low-risk group. There was excellent discrimination between 5-year rates of aortic complications in low-risk and high-risk groups at both centers (center 1: 12% vs 31%, P < .001; center 2: 12% vs 45%, P = .002).

Comment: The study describes a simple risk score to predict aortic complications after EVAR. There are several limitations, including that the risk score has not been validated outside of the two participating centers and that most of the devices in this study were Cook Zenith endografts, so validity of the risk score for other devices will require additional confirmation.

Urgent Best Medical Therapy May Obviate the Need for Urgent Surgery in Patients With Symptomatic Carotid Stenosis


Conclusions: Carotid endarterectomy (CEA) can be performed in the subacute period without significantly increasing operative risk. Urgent best medical treatment is associated with a significant reduction in risk of early neurologic recurrence in CEA patients.

Summary: Current guidelines from the European Vascular Surgical Society, the United Kingdom National Institute for Clinical Excellence, and the American Heart Association all recommend that CEA should be performed within 14 days of onset of neurologic symptoms in patients with >50% symptomatic ipsilateral carotid artery stenosis. It has been calculated that performing subacute CEA ≤2 weeks in patients with symptomatic 50% to 99% stenosis (North American Symptomatic Carotid Endarterectomy Trial) and 70% to 99% stenosis (European Carotid Surgery Trial) will prevent 185 ipsilateral disabling strokes per 1000 CEAs at 5 years. The number needed to treat is six. In contrast, only eight strokes will be prevented in 5 years if surgery is delayed by >12 weeks and the number needed to treat is 125 (Rothwell PM et al, Lancet 2004;363:915-24, and Naylor AR et al, Stroke 2007;38:23-30). This study examines the effect of introducing a rapid-access carotid surgery service with focus on the effects of delays for surgery, procedural risk of CEA, and effective best medical treatment on recurrent neurologic symptoms. This is a prospective population-based study of delays to CEA and 30-day outcomes in patients with symptomatic carotid stenosis. Neurologic recurrence (NR) rate was determined after initiation of best medical treatment consisting of a loading dose of aspirin/clopidogrel, followed by dual therapy with aspirin and clopidogrel and a statin until the time of CEA. The NR ≤90 days before the index event was also assessed. There were 4905 patients with transient ischemic attacks/ischemic stroke and ocular events. Of these, 115 symptomatic patients underwent CEA, 42% ≤14 days of the index event and 99% ≤14 days of surgical referral. The overall NR from index event to CEA in symptomatic carotid stenosis patients was lower (2.5% [95% confidence interval, 1.6%-6%]) with best medical treatment compared with NR ≤90 days in patients undergoing urgent carotid surgery clinic and institution of best medical management (29% [95% confidence interval, 22%-37%]; P < .00001). There were no strokes or death ≤30 days after CEA and no significant differences in outcomes among 42 early (<14 days), 46 intermediate (14-30 days), and 21 delayed (>30 days) CEAs.

Comment: The “control” group in this series consisted of patients who basically had a small stroke or TIA or ocular event and who did not go to the doctor until they had the second event. Because they did not go to the doctor, they did not receive “best medical therapy.” The study group were those who went to the doctor after their initial event and did receive a combination of aspirin and clopidogrel and a statin. Obviously, there may be unrecognized confounding variables in patients who go to the doctor after a neurologic event vs those who wait for a second or third event. No patient underwent CEA on the weekend or ≤52 days of a neurologic event. The data suggest institution of immediate best medical management of aspirin, clopidogrel, and statin, followed by early but not necessarily urgent CEA, is a reasonable course of action in the patient with high-grade symptomatic carotid stenosis.