Public Statement:

Hyperhidrosis may be defined as excessive sweating, beyond a level required to maintain normal body temperature in response to heat exposure or exercise. Treatment of hyperhidrosis with endoscopic thoracic sympathectomy is covered for individuals who have severe symptoms and have failed treatment with aluminum chloride.

Medical Policy Statement:

Endoscopic thoracic sympathectomy is covered for patients with hyperhidrosis who have failed treatment with aluminum chloride, and who have medical complications such as skin maceration with secondary infections or significant functional impairments that interfere with their employment.

Limits:

Iontophoresis, liposuction, and lumbar sympathectomy are not covered for hyperhidrosis.

Codes Used in this Policy:

32664           Endoscopic thoracic sympathectomy

Background:

Hyperhidrosis may be defined as excessive sweating, beyond a level required to maintain normal body temperature in response to heat exposure or exercise. Hyperhidrosis can be classified as either primary or secondary. Primary hyperhidrosis is idiopathic in nature, typically involving the hands, feet or axillae. Secondary
hyperhidrosis can result from a variety of drugs, such as tricyclic antidepressants, selective serotonin reuptake inhibitors, or underlying disease/conditions, such as febrile diseases, diabetes mellitus, or menopause. Gustatory hyperhidrosis is an unusual iatrogenic cause of facial hyperhidrosis in response to hot or spicy foods, resulting from surgery to the parotid gland and subsequent aberrant regenerating parasympathetic fibers.

The consequences of hyperhidrosis are primarily psychosocial in nature. Excessive sweating may be socially embarrassing (i.e., limiting the ability to shake hands) or interfere with certain professions. In addition, hyperhidrosis may require several changes of clothing a day; excessive sweating may also result in staining of clothing or shoes.

Treatment of secondary hyperhidrosis focuses on treatment of the underlying cause. A variety of therapies have been investigated for primary hyperhidrosis, including topical therapy with aluminum chloride or tanning agents, iontophoresis, botulinum toxin, liposuction, and endoscopic transthoracic sympathectomy. Botulinum toxin has also been investigated as a treatment of secondary gustatory hyperhidrosis.

**Transthoracic sympathectomy for primary focal hyperhidrosis**

No randomized controlled trials were identified that compared transthoracic sympathectomy to sham surgery. Several RCTs and one meta-analysis have compared different approaches to surgery. In 2010, Deng and colleagues published a meta-analysis of data from randomized controlled trials and observational studies evaluating thorascopic sympathectomy; they only included studies on patients with palmar hyperhidrosis (Deng, 2010). The authors pooled outcome data from different approaches to sympathectomy, i.e., single-ganglia blockage (T2, T3 or T4), and multi-ganglia blockage (T2-3, T2-4 or T3-4). Based on these analyses, they concluded that T3 (11 studies) and T3-4 (2 studies) had the “best” clinical efficacy i.e., postoperative resolution of symptoms. The T3 approach resulted in a 97.9% pooled efficacy rate and the T3-4 approach resulted in a 100% pooled efficacy rate. In the studies for which data were available, the pooled rate of postoperative compensatory sweating was 40% after T3 surgery. Data on compensatory sweating after T3-4 surgery was only available from one study with 60 patients; a pooled analysis could not be performed.

A randomized, controlled trial, published in 2008 by Inan and colleagues, included 80 male patients undergoing bilateral thoracoscopic sympathectomy or sympathetic blockage to treat primary hyperhidrosis (Inan, 2008). The subjects were divided into four groups depending on the technique used for sympathetic blockage; techniques included resection (n = 20), transection (n = 20), ablation (n = 20), and clipping (n = 20). The primary success rate was 96.3% for isolated palmar hyperhidrosis, 95.7% for palmar and axillary hyperhidrosis, and 66.7% for palmar and face/scalp hyperhidrosis. No recurrence was observed. The overall success rate of the operation was 95%, and the differences among the four groups were not statistically significant. In the clipping group, the duration of the surgical procedure was significantly shorter than in the other
groups. Complication rates were similar among the groups. The postoperative chest roentgenogram revealed pneumothorax in 9 patients, but none of them required intervention. The authors concluded that thoracic endoscopic sympathetic blockage yields similar results irrespective of the surgical technique adopted, conclusions need to be tempered by the size of the study groups.

Liu and colleagues in China published a randomized trial in 2009 comparing T3 and T4 sympathectomy in 141 patients with primary palmar hyperhidrosis (Liu, 2009). The patients’ prior use of nonsurgical treatments was not reported. Only 43 patients (30%) had severe palmar hyperhidrosis; 86 (61%) and 12 (9%) reported moderate and minor hyperhidrosis, respectfully. After surgery, 46 of 62 (74.2%) of patients in the T3 group and 28 of 69 (40.5%) in the T4 group reported dry hands. This difference was statistically significant favoring the T3 group, p<0.001. However, 48 of 62 (77.4%) of patients in the T3 group and 39 of 69 (56.5%) of patients in the T4 group reported compensatory sweating. The rate of compensatory sweating was significantly higher in the T3 group, p=0.01. A moderate or embarrassing level of compensatory sweating was reported by 9 patients (14.5%) in the T3 group and 2 (2.9%) in the T4 group; no patients reporting disabling compensatory sweating.

There is also a large amount of data from case series on transthoracic sympathectomy for treating primary focal hyperhidrosis. Through 2003, large case series reported success rates of up to 98% (24-30) Recent case series also report high success rates, although there are potential adverse effects. For example, in 2010, Wait and colleagues published a retrospective analysis of prospectively collected data on patients who underwent bilateral thoracoscopic sympathectomy for hyperhidrosis (Wait, 2010). Additional follow-up data were obtained from the patients. A total of 348 patients underwent surgery; data were available on 322 (93%) of patients. Patients’ previous use of non-surgical hyperhidrosis treatments was not reported. Procedures for the first 100 patients were sympathetic chain resections (sympathectomy) which involved completely excising the sympathetic chain using sharp dissection. In the remaining patients, focal in situ transaction of the upper sympathetic chain (sympathotomy) was performed. The extent of the sympathology varied according to the patient’s symptoms. The procedure was generally limited to T2 or T3 for isolated palmar or craniofacial hydrohidrosis, and extended from T2 to T4 for axillary hyperhidrosis. Patients had hyperhidrosis of one or more areas; 81.5% had more than one affected region. Complete resolution of symptoms was experienced by 300 of 301 (99.7%) with palmar hyperhidrosis, 136 of 186 (73%) with axillary hyperhidrosis, 27 of 30 (90%) with craniofacial hyperhidrosis and 19 of 197 (9.6%) with plantar hyperhidrosis. There was a low rate of complications, and most occurred in the first half of the series. Nine patients (2.8%) required chest tube evacuation of a pneumothorax. Seven patients (2.2%) had unilateral Horner’s syndrome; 5 of these were among the first 100 patients. Compensatory sweating was reported by a total of 201 of 322 (62%) patients. The compensatory sweating was severe in 20 (6.2%) of patients and mild or moderate in 181 (56.2%) of patients. It is worth noting that thoracoscopic sympathectomy was performed in some cases of plantar hyperhidrosis and that there was a low rate of success. In addition, when reporting rates of compensatory sweating, the authors did not distinguish between mild

ARBenefits reserves the right to alter, amend, change or supplement medical policies as needed. QualChoice reviews and authorizes services and substances. CPT and HCPCS codes are listed as a convenience and any absent, new or changed codes do not alter the intent of the policy.
and moderate levels of symptoms although these could have different clinical implications for the patient.

A prospective series from India by Prasad and colleagues reported on 322 patients with primary palmar hyperhidrosis who underwent endoscopic thoracic sympathectomy at the T3-T4 level and were followed for a minimum of 24 months (Prasad, 2010). The authors did not discuss patients’ previous use of other treatments. All patients reported cessation of palmar hyperhidrosis immediately following the procedure. Three patients (<1%) experienced recurrence, but reported that their symptoms were less severe than before. Eleven patients had symptoms requiring a post-operative x-ray; one patient had a minor pneumothorax. Sixty-four percent of patients reported compensatory sweating; symptoms were mild in 35%, moderate in 25% and severe in 4%; the remaining 37% of patients reported no compensatory sweating.

Application to Products

This policy applies to ARBenefits. Consult ARBenefits Summary Plan Description (SPD) for additional information.

References:


