avoid this undesirable outcome after sympathectomy.

We are indeed concerned with a strong recommendation of a “complete and adequate resection for relief of symptoms,” and we believe that attention must be brought to this subject.

Marcelo Passos Teivelis, MD
Andrea Yasbek Varella, MD
Nelson Wolosker, MD, PhD
Hospital Israelita Albert Einstein
São Paulo, Brazil

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Reply to the Editor:

We thank Teivelis and colleagues for their interest in our article regarding the extent of sympathetic chain removal and resulting compensatory hyperhidrosis (CH) after endoscopic thoracic sympathectomy (ETS).¹ There is little disagreement that adequately powered randomized prospective trials are superior to nonrandomized prospective studies

or retrospective reviews. Despite a large body of literature on the topic, however, few investigations have performed randomized, clinical trials. Significant controversy remains regarding the optimal level and extent of sympathetic chain removal in the treatment of primary hyperhidrosis of the hands, axillae, feet, and face.

The Society of Thoracic Surgeons assembled an expert task force to comprehensively review 102 studies, including 12 randomized clinical trials, which determined that the number of sympathetic levels interrupted has been inconclusive as a risk factor for moderate to severe CH.² These findings were consistent with those previously published by Kopelman and Hashmonai.³ In their review of 87 studies, they statistically determined that the literature did not support claims that restricting the extent of sympathetic ablation resulted in a statistically significant reduction in the frequency of CH.² Even though we perform more extensive resections (T2-T5 and T2-T6) than commonly described in the literature, our results are similar or better than those in other studies.¹ A recently published randomized prospective trial by Cai and colleagues⁴ containing 116 patients with primary palmar hyperhidrosis found that there were no significant differences with respect to the frequency of minor or severe CH in patients who received either T2 to T3 or more extensive T2 to T4 resections.⁴ A study by Lesèche and colleagues,⁵ which compared T2 to T4 and T2 to T5 resections with more limited ETS, also found that incidence and severity of CH was not associated with the extent of resection.

The physiologic basis of CH is still not well understood, and the extent of resection is only one of many factors that likely influence the development of severe CH. These include sex, preoperative hyperhidrosis location and degree,⁶ and possibly body mass

index, age, ethnicity, lifestyle, and climate. Some consensus has been reached regarding the recommended location of interruption according to the distribution of sweating, with T3 to T4 recommended for palmar sweating and T4 to T5 recommended for both palmar, plantar and axillary hyperhidrosis.² Because many of our patients had widespread symptoms, including palmar, plantar, and axillary sweating, we decided to tailor the operation on the basis their symptoms and performed adequately extensive resections to improve patient satisfaction.¹ Surgeons must balance the possibility of persistent hyperhidrosis after inadequate resection against the risks of unnecessarily excessive interruption that could possibly lead to bradycardia, Horner syndrome, or CH. At our institution, primarily extensive ETS was performed between T2 to T5 and T2 to T6 with positive patient satisfaction, as well as some of the lowest rates of CH reported in the literature.¹ In light of our experience and our review of the literature, we therefore do not recommend limiting the extent of resection in an attempt to reduce the incidence or severity of CH. Further investigation is required, however, for a better understanding of patient risk factors for development of CH in addition to surgical technique and extent of ETS.

Tyler M. Gunn, MD^a

James E. Speicher, MD^b

Mark D. Iannetoni, MD, MBA^c

^aDivision of Cardiothoracic Surgery
University of Kentucky
Lexington, Ky

^bSection of Thoracic Surgery
Department of General, Thoracic, and
Vascular Surgery
Virginia Mason Medical Center
Seattle, Wash

^cDivision of General Thoracic
Surgery
Department of Cardiovascular
Sciences
East Carolina University
Greenville, NC

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