

Video-assisted thoracic sympathectomy for the treatment of axillary hyperhidrosis

Simpatectomia torácica videoassistida no tratamento da hiperidrose axilar

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Axillary hyperhidrosis is a clinical condition that causes embarrassment to patients, limiting their activities of daily living, as well as interfering with their work, leisure activities, and social activities. There is a consensus that such excessive sweating deeply affects the quality of life of the affected patients, being considered a condition capable of incapacitating them not only socially and professionally but also psychologically. Although no epidemiological studies of axillary hyperhidrosis have been conducted in Brazil, the condition to be much more common than previously thought. In a population-based study conducted in the United States, the prevalence of axillary hyperhidrosis was 1.4%, that is, it was found to affect approximately 4 million people.⁽¹⁾ Unlike palmoplantar hyperhidrosis, which usually occurs in childhood, axillary hyperhidrosis generally manifests in adolescence, the phase of life in which there is hormonal and sexual maturation. The significant psychological instability that is typical of this transitional period is an additional factor aggravating this condition. Although an emotional stimulus is necessary to trigger hyperhidrosis, we cannot characterize it as a psychological illness, but rather we should define it as a physiological disorder, as do most authors.⁽²⁾ In hyperhidrosis patients, the hypothalamic center that controls sweating is more sensitive to stimuli from the cortical areas of the brain (emotional stimuli) than it is in the general population.

Axillary hyperhidrosis affects both genders equally. However, the fact that women are, by nature, more susceptible to adverse psychological impacts and, consequently, more often seek treatment gives the impression that hyperhidrosis is more prevalent in females.⁽³⁾ In the current issue of the Brazilian Journal of Pulmonology, Boscardim et al.⁽⁴⁾ analyzed 118 patients with axillary hyperhidrosis treated with video-assisted thoracic sympathectomy, and nearly 80% of those patients were female. Many of the patients had suffered from this

condition for many years, undergoing the surgical procedure in adulthood, and, in some cases, at an advanced age, certainly because they had been unaware of the fact that there is a simple, effective, and widely accepted treatment: video-assisted thoracic sympathectomy. This minimally invasive technique, developed in the late 1980s, came to be more widely employed and disseminated in scientific studies, as well as in the lay press, in the 1990s. As an alternative to surgical treatment, the use of low doses of anticholinergic drugs has shown encouraging results for the primary treatment of patients with hyperhidrosis, as well as for alleviating postoperative compensatory hyperhidrosis, without significant side effects, in preliminary studies conducted at the Hyperhidrosis Outpatient Clinic of the *Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo* (HC-FMUSP, University of São Paulo School of Medicine *Hospital das Clínicas*), located in the city of São Paulo, Brazil.⁽⁵⁾

Boscardim et al. contraindicated surgery in patients with a body mass index (BMI) > 30 kg/m² and recommended that those with a BMI between 25 and 30 kg/m² lose weight before undergoing the surgical procedure.⁽⁴⁾ Our approach has been to contraindicate surgery in patients with a BMI > 25 kg/m², assuming that it is not attributable to pronounced muscle mass. We developed this approach on the basis of the study conducted at the HC-FMUSP Hyperhidrosis Outpatient Clinic,⁽⁵⁾ in which it was demonstrated that overweight patients had more severe compensatory hyperhidrosis in the postoperative period, a finding that was also reported in the study by Boscardim et al.⁽⁴⁾

At the HC-FMUSP Hyperhidrosis Outpatient Clinic, we initially treated axillary hyperhidrosis by resection from the second to the fourth ganglia of the thoracic sympathetic chain.⁽⁶⁾ Subsequently, on the basis of observations made at our outpatient clinic,⁽⁷⁾ we began to spare the second ganglion and to perform thermal

ablation only of the third and fourth ganglia. More recently, we reduced the extent of thermal ablation even further, limiting it to the fourth ganglion of the thoracic sympathetic chain, because we thus obtained equally effective results in the treatment of axillary hyperhidrosis with a lower incidence and severity of compensatory hyperhidrosis.^(8,9) The sympathectomy technique employed by Boscardim et al.⁽⁴⁾ is similar to that used by us, which is sympathectomy of the chain at the fourth and fifth costal arches and subsequent thermal ablation of the segment between the two, where the fourth ganglion is usually located. This approach, unlike simple sympathectomy, destroys a large segment of the sympathetic trunk, thereby preventing regeneration of the chain.⁽⁷⁾

In a study conducted by Munia et al.,⁽⁹⁾ the degree of patient satisfaction with the surgical outcome was excellent at one-year follow-up, none of the patients submitted to the procedure involving only the fourth ganglion of the sympathetic chain being dissatisfied, unlike what occurred in the study by Boscardim et al.,⁽⁴⁾ in which the percentage of patients who were dissatisfied with the surgical outcome reached 7.7% in the same follow-up period. Patient selection and the surgical experience of the authors in the treatment of patients with hyperhidrosis might be the determining factors of these discrepant results.

Following bilateral thoracic sympathectomy in patients with hyperhidrosis, compensatory hyperhidrosis is quite common and is the most significant postoperative complication. Procedures involving smaller portions of the thoracic sympathetic chain translate to less severe compensatory hyperhidrosis.^(9,10) We fully agree with the conclusions by Boscardim et al., especially when they emphasize that it is important that all patients who are candidates for thoracic sympathectomy be informed of its most feared side effect.

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