Severe compensatory hyperhidrosis after thoracic sympathectomy

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A man was evaluated at age 35 years for burning/shooting pain in his left chest and drenching sweats affecting the lower trunk and legs since bilateral T₂-T₆ sympathectomy at age 22 for palmar and axillary hyperhidrosis. Thermoregulatory sweat test showed anhidrosis above T_{5/6} (sparing the left T₂ dermatome) with rapid and profuse sweating elsewhere (figure). Severe compensatory hyperhidrosis is a known complication of extensive sympathectomy. Limited sympathectomy (disruption of fibers between stellate and T2 ganglia) or sympathectomy (e.g., T4 ganglionectomy) might be preferred for medically refractory palmar hyperhidrosis, maximizing palmar dryness, minimizing compensatory hyperhidrosis, and rarely causing intercostal neuralgia or Horner syndrome.^{1,2} Medical therapy for hyperhidrosis, whether primary or compensatory, may include topical agents, oral medications with anticholinergic properties, or botulinum toxin injections; all were unsuccessful or not tolerated in this patient.

Figure Anhidrosis and compensatory hyperhidrosis on thermoregulatory sweat test

Alizarin powder indicates sweating in purple; anhidrotic areas remain yellow. Following thoracic sympathectomy, sweating was absent above T_{5/6} except for part of the left T₂ dermatome. Sweating elsewhere began rapidly at an oral temperature of only 37.4°C and became profuse by thermoregulatory endpoint.

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REFERENCES

1. Atkinson JDL, Fode-Thomas NC, Fealey RD, Eisenach JH, Goerrs SJ. Endoscopic transthoracic limited sympathectomy for palmar-plantar hyperhidrosis: outcomes and complications during a 10-year period. *Mayo Clin Proc* 2011;86:721–729.
2. Abd Ellatif ME, El Hadidi A, Musa AM, et al. Optimal level of sympathectomy for primary palmar hyperhidrosis: T3 versus T4 in a retrospective cohort study. *Int J Surg* 2014;12:778–782.

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