

Teaching NeuroImage: Absence of Wrinkles in Small Fiber Neuropathy

Lucas Augusto Piedrafita Vico, MD, Ricardo Reisin, MD, and Sergio Gonorazky, MD

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Correspondence

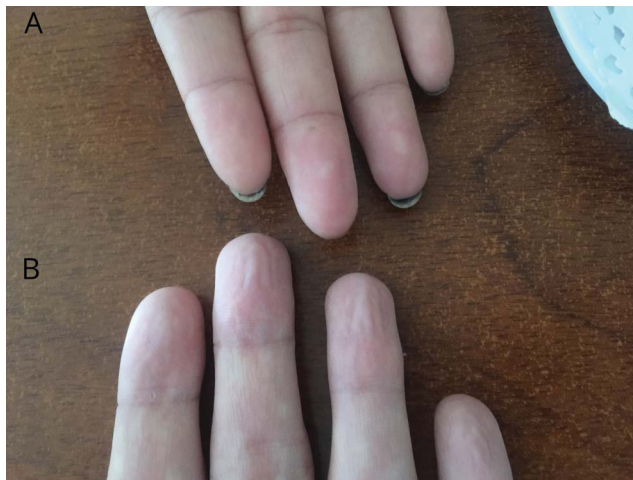
Dr. Piedrafita Vico
lucasaugustopiedraitavico@gmail.com

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Figure Water Immersion Wrinkling Test



(A) Patient with small fiber neuropathy, (B) control subject. Both hands were immersed in water at 40°C for 30 minutes. A complete lack of wrinkles was observed in the patient (A) at the end of the test. Two or fewer digital wrinkles is consistent with distal sympathetic dysfunction.²

A 48-year-old woman with clinical diagnosis of small fiber neuropathy, supported by abnormal thermal thresholds using quantitative sensory testing, underwent the water immersion wrinkling test showing lack of digital wrinkles (Figure). Normally, in the glabrous skin of the distal phalanges, water penetrates the sweat ducts provoking electrolytic changes that increase the firing of sympathetic terminals leading to vasoconstriction of the glomus bodies, generating wrinkles.¹ Sympathetic fiber damage is responsible for the absence of wrinkles. This test has a sensitivity of 71% (58%–82%) and a specificity of 73% (56%–85%).² This is a simple, non-invasive, frequently forgotten bedside test that contributes to the diagnosis of small fiber neuropathy.

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From the Lucas Piedrafita Vico (L.A.P.V.), Hospital Privado de Comunidad, Mar del Plata, Buenos Aires, Argentina; Ricardo Reisin (R.R.), Hospital Británico, Ciudad Autónoma de Buenos Aires, Argentina; and Sergio Gonorazky (S.G.), Hospital Privado de Comunidad, Mar del Plata, Buenos Aires, Argentina.

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Appendix Authors

Name	Location	Contribution
Lucas Augusto Piedrafita Vico, MD	Hospital Privado de Comunidad, Mar del Plata, Buenos Aires, Argentina	Drafting/revision of the manuscript for content, including medical writing for content; major role in the acquisition of data; study concept or design; analysis or interpretation of data
Ricardo Reisin, MD	Hospital Británico, Ciudad Autónoma de Buenos Aires, Argentina	Drafting/revision of the manuscript for content, including medical writing for content; analysis or interpretation of data

Appendix *(continued)*

Name	Location	Contribution
Sergio Gonorazky, MD	Hospital Privado de Comunidad, Mar del Plata, Buenos Aires, Argentina	Drafting/revision of the manuscript for content, including medical writing for content; analysis or interpretation of data

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