

# Pain-related nociceptive evoked potential and skin wrinkle test in small fiber neuropathy

Potencial evocado nociceptivo relacionado à dor e teste de enrugamento cutâneo na neuropatia de fibras finas

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A 58-year-old woman with clinically probable small fiber neuropathy (SFN)<sup>1</sup>, with normal electroneuromyography, was evaluated with pain-related nociceptive evoked potential (PREP) with a concentric planar electrode stimulation on the dorsum of the hands and feet<sup>2</sup> and skin wrinkle test (SWT)<sup>3</sup>. The PREP showed N1 latency delay (Figure 1), compatible with the change in SWT induced by water, which indicated a Grade 0 pattern (Figure 2), as can be seen in sympathetic autonomic small fiber dysfunction.

New electrophysiological tools, combined with SWT and specific neurological examination, contribute to the diagnosis of SFN.

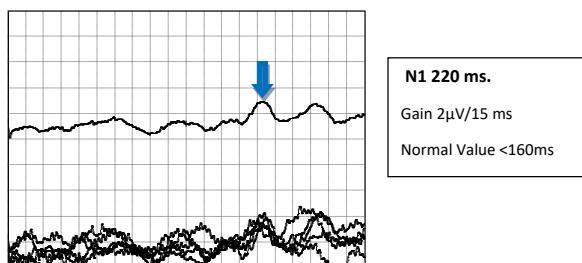


Figure 1. Pain-related nociceptive evoked potential.

Multiple-choice questions with related answers are given in Supplementary Material. The following material is available online for this article: [https://www.arquivosdeneurologia.org/wp-content/uploads/2022/02/ANP\\_2021327\\_material-suplementar\\_16-02.pdf](https://www.arquivosdeneurologia.org/wp-content/uploads/2022/02/ANP_2021327_material-suplementar_16-02.pdf)

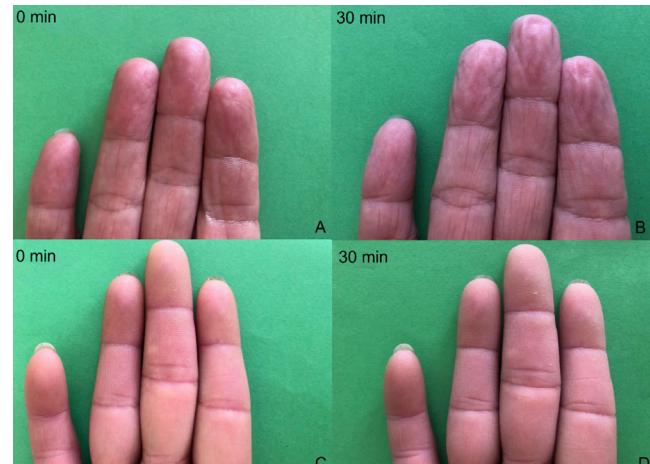


Figure 2. Skin wrinkle test. Patient (C and D). Normal test (A and B).

## References

1. Cazzato D, Lauria G. Small fibre neuropathy. *Curr Opin Neurol*. 2017 Oct;30(5):490-9. <https://doi.org/10.1097/WCO.0000000000000472>
2. Hernandez Fustes OJ, Kay CSK, Lorenzoni PJ, Ducci RDP, Werneck LC, Scola RH. Somatosensory evoked potentials in clinical practice: a review. *Arq Neuro-Psiquiatr*. 2021 sEP;79(9):824-31. <https://doi.org/10.1590/0004-282X-ANP-2020-0427>
3. O'Riain S. New and simple test of nerve function in hand. *Br Med J*. 1973 Sep;3(5881):615-6. <https://doi.org/10.1136/bmj.3.5881.615>

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