

Trigeminal neuralgia: a neurosensory disorder

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Dear Editor:

Trigeminal neuralgia (TN) is the most common disabling cranial neuropathy, characterized by chronic, abrupt, unilateral, episodic pain radiating to the auditory and orbicular region, resembling electrical tics (1). The maxillary and mandibular branches of the trigeminal nerve are usually the most affected. Since these branches innervate regions of the oral cavity, patients usually go to the dentist before consulting a general physician or neurologist (2). As mentioned by Tuncer et al. (3), in an attempt to relieve discomfort, some dentists often confuse the neuralgic pain of TN with odontalgia, leading to incorrect treatments for the patient.

Regarding its etiology, in addition to the intracranial compressions of the Gasserian ganglion and the presence of other predisposing neuropathologies, such as multiple sclerosis or nerve demyelination, the literature indicates that iatrogenic lesions of the trigeminal nerve are associated with invasive oral and dental surgeries, which may contribute to the onset of TN, being more common the exodontia of impacted mandibular third molars (4). These procedures can damage the lingual nerve due to constant punctures involved in administering booster doses of local anesthetics, as well as the overdose of lidocaine with vasoconstrictor. Another factor reported is the overinstrumentation during endodontic treatment of molars that are in close proximity to the inferior dental nerve (5).

Numerous studies indicate that the diagnosis of TN is evolving and remains a challenge for non-specialist physicians. Even today, cranial magnetic resonance imaging is considered important for ruling out tumors or nerve degeneration that may be associated with this neuralgia. However, patient interviews, along with typical clinical signs and symptoms, continue to be used for early detection (6). In this way, conducting a thorough review of the medical history, an adequate anamnesis, and a differential diagnosis is essential to rule out TN (7).

In terms of treatment, it will depend on medical management, which may be pharmacological or surgical. Nevertheless, it has been reported that the

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involvement of the dentist in the multidisciplinary management of TN yields better results, since it is not only about calming pain, but also about restoring oral, mental and social health (8). In turn, a multidisciplinary approach is vital to provide a correct diagnosis for the patient's benefit to control episodes of pain and prevent any negative impact on the quality of life and oral health (9, 10).

Dentists can improve the living conditions of patients with TN through an appropriate diagnosis that rules out dental pain. This is fundamental for a multidisciplinary approach in the treatment of this neuropathology. Following the approach, the pain would not be treated the same way in all cases—i.e., with nonsteroidal anti-inflammatory drugs (NSAIDs) and subsequent treatments if pharmacological management fails—as this could lead to systemic damage, such as drug hypersensitivity, unnecessary extractions, as an undue financial burden on the patient.

REFERENCIAS

1. Ganesan K, Thomson A. Trigeminal neuralgia [Internet]. In: Bonanthaya K, Panneerselvam E, Manuel S, Kumar V, Rai A, editores. *Oral and Maxillofacial Surgery for the Clinician*. Singapore: Springer; 2021. pp. 531-546. Available from: https://doi.org/10.1007/978-981-15-1346-6_26
2. Marín-Medina DS, Gámez-Cárdenas M. [Trigeminal neuralgia: clinical and therapeutic aspects]. *Acta Neurol Colomb* [Internet]. 2019; 35(4): 193-203. Available from: <https://doi.org/10.22379/24224022267> Spanish.
3. Tuncer Z, Akbulut N, Ozturk V, Beyaz SG. Knowledge and experience of dentists with patients with trigeminal neuralgia: a prospective, cross-sectional survey study. *Cranio* [Internet]. 2024; 42(1): 84-89. Available from: <https://doi.org/10.1080/08869634.2023.2197828>
4. Almohammadi T, Yates J, Aljohani M, Alshehri S. Surgical outcomes of the surgical techniques following management of iatrogenic trigeminal nerve injuries: a systematic review. *Saudi Dent J* [Internet]. 2024; 36(4): 499-508. Available from: <https://doi.org/10.1016/j.sdentj.2023.12.018>
5. Al-Ibrahemy AA, Mahdi KA, Almuhanha MY. The correlation between trigeminal neuralgia and local anesthetics neurotoxicity associated with acute inflammation: a cross-sectional study. *Open Dent J* [Internet]. 2023; 17: e187421062308180. Available from: <http://dx.doi.org/10.2174/18742106-v17-230809-2022-101>
6. Dehta P, Sarode G, Sarode S, Gadbail A, Dehta FM, Swain SK, et al. Natural history of trigeminal neuralgia—A hospital-based retrospective study. *Oral Dis* [Internet]. 2020; 26(3): 647-655. Available from: <https://doi.org/10.1111/odi.13263>
7. Teshima TH, Zakrzewska JM, Potter R. A systematic review of screening diagnostic tools for trigeminal neuralgia. *Br J Pain* [Internet]. 2023; 17(3): 255-266. Available from: <https://doi.org/10.1177/20494637221146854>
8. Latorre G, González-García N, García-Ull J, González-Oria C, Porta-Etessam J, Molina FJ, et al. [Diagnosis and treatment of trigeminal neuralgia: Consensus statement from the Spanish Society of Neurology's Headache Study Group]. *Neurología* [Internet]. 2023; 38(Supl. 1): S37-S52. Available from: <https://doi.org/10.1016/j.nrl.2021.09.015> Spanish.
9. Singhotla S, Tchantchaleishvili N, Wu J, Zrinzo L, Thorne L, Akram H, et al. Long-term evaluation of a multidisciplinary trigeminal neuralgia service. *J Headache Pain* [Internet]. 2022; 23: 114. Available from: <https://doi.org/10.1186/s10194-022-01489-7>
10. Labanca M, Gianò M, Franco C, Rezzani R. Orofacial pain and dentistry management: guidelines for a more comprehensive evidence-based approach. *Diagnostics (Basel)* [Internet]. 2023; 13(17): 2854. Available from: <https://doi.org/10.3390/diagnostics13172854>