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Trigeminal Neuropathy After Tooth Extraction Overlapping Trigeminal Neuralgia

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Introduction
Trigeminal neuralgia (TN) affects approximately 4.5/100,000 patients per year and can be a devastating condition, depending on the frequency and intensity of the painful paroxysms and the degree of pain control. It is usually classified into two different categories: primary or idiopathic, including patients with a negative physical exam and otherwise normal sensor and motor functions in which an organic cause for pain has been excluded; and secondary, including patients with associated physical findings related to organic lesions involving the course of the nerve, often the trigeminal ganglion, sensory root, or root entry zone at the pons. The widespread use of high-resolution MRI in the evaluation of trigeminal neuralgia lead to the recognition of an increasing number of patients with vascular compression of the nerve at the root entry zone among the idiopathic group and therefore, neurovascular conflict, became the most commonly accepted pathophysiologic mechanism to explain primary disease. Painful trigeminal neuropathy is characterized by a more continuous type of pain, although it can have episodes of intensification, and it is usually associated with a secondary cause, thus being one of the main differential diagnoses of trigeminal neuralgia.
Objectives
Realize prevention, early detection, and treatment of trigeminal neuropathy in tooth extraction procedures for patients with a history of TN.
Promote collaboration between dentists, neurologists, and pain management specialists for patient care in cases of trigeminal neuropathy and neuralgia after tooth extraction.
Case Report
A 71-year-old man presenting with long-standing sticking pain located in the face, in the mandibular region on the left, which got worse 1 year ago (VAS 5/10) after the extraction of teeth from the upper and lower left arches; before the extraction, he reports that he had the feeling that the teeth were "soft," but after the extraction they had a significant worsening in the intensity of the pain. Currently, the pain doesn't relieve completely, but it relieves when you use dipirone, use cold compresses and ointment with Xylocaine 4 times a day, relief that lasts about 1 hour. It also appears in more intense episodes 8-10x/day (EVA 10/10), which last seconds. Reports that it feels worse when brushing teeth and bite of food. There is night pain that wakes you up at night, but it isn't always intense. Initially, he sought dentists, who recommended and performed tooth extraction, but once realizing that the pain wasn't abating, he was referred to neurology. It was evaluated by the team from the General Hospital of Fortaleza (neurologist and dental surgeons), who advised the diagnostic hypothesis of trigeminal neuropathy after tooth extraction, but cannot exclude superimposed trigeminal neuralgia and performed brain MRI with FIESTA sequence which showed up: thin vascular handles that made before proximity to the segment cisternal of the right trigeminal nerve and discrete impression on the cisternal segment of the left trigeminal nerve. The finding on the right is more subtle, however, the finding on the left may represent neurovascular conflict and its value depends on the correlation. Gabapentin was started for the pain with good response, almost completely responding, and maintained in subsequent evaluation.
Conclusion
TN is usually responsive, at least initially, to pharmacotherapy. Treatment of neuropathy is based on anti-neuropathic agents and drugs. Neurosurgical options that are useful for TN are contraindicated or unsuccessful to drug treatment. Radiofrequency treatment is an effective method for reducing pain.
Definitive diagnosis for facial pain is a complicated task and requires expertise and meticulousness. Misdiagnosis can result in incorrect treatments.

Keywords: Trigeminal; Neuropathy; Tooth.