



Can chronic pain develop following routine dental treatment?



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When patients suffer from chronic pain or significant discomfort following routine dental treatment, we look for additional pathology in the painful area, or for insufficiencies in the treatment provided. Occasionally, we do not find anything that can be addressed and, in spite of our efforts, the pain persists. Those cases can be diagnosed as trigeminal neuropathy.

Chronic pain following invasive procedures is not unique to dentistry or to the trigeminal system. Persistent pain can follow nerve injuries associated with a wide variety of therapeutic interventions. For example, more than 10% of women who undergo a Cesarean section suffer from daily pain a year after the procedure.¹ Nearly 40% of patients who undergo chest surgery still experience persistent pain 2 years later;² and more than 40% of patients who have a mastectomy due to breast cancer continue to suffer from persistent pain 2 to 3 years afterwards.³

It is interesting to note that the prevalence of chronic pain following a dental procedure is lower than in other areas of the body. For example, only 3 to 7% of patients present with chronic pain following endodontic treatment.⁴ Considering the number of surgical interventions performed by dentists, the incidence of painful trigeminal traumatic neuropathies is either surprisingly low or largely undiagnosed.

Despite recent research, we still cannot identify which patients undergoing such procedures are at increased risk for developing persistent pain following dental procedures; however, there is some progress in understanding the mechanisms behind this devastating condition.

While Cesareans, chest surgeries, and mastectomies undoubtedly appear to be more invasive than routine dental treatment, the underlying mechanisms to chronic pain may be similar.

Recent studies⁵ suggest that impaired endogenous analgesia may be associated with the development of postsurgical chronic pain. Similar to other chronic pain conditions, patients who develop persistent pain following dental invasive procedures have a less efficient pain modulation system (their Central Nervous System's ability to modulate pain is deficient), and therefore are at risk of developing such pain.

It is important to note that neuropathy is not the most common cause for posttreatment pain; however, dentists should consider this option and modify the treatment plan accordingly. There are cases of chronic pain following dental procedures, and further invasive procedures may only aggravate the pain. Nonetheless, diagnosis of chronic pain following dental procedures is difficult, and misdiagnosis may lead to unnecessary treatment.

The next and very challenging step should be to find easy methods to identify the patients who are at risk and to establish treatment protocols to help prevent chronic pain from developing following routine dental procedures.

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