

A Brief Note on Mandibular Nerve Block Anaesthesia

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Description

Inferior Alveolar Nerve (IAN) block injections are commonly used in clinical practice, but they are not free from complications. The aim of the present study is to assess the nerve-related adverse effects of IAN block anaesthesia. Overall, nerve damage following an IAN block anaesthesia injection is a rare occurrence, probably due to the direct nerve trauma of the needle, a neurotoxic effect of the used anaesthetic solution and/or a combination of them. From a medico-legal point of view, a balanced discussion prior to nerve block anaesthesia should be pursued in order to avoid patients' reluctance to undergo necessary dental treatment due to the remote eventuality of nerve injury [1].

The temporary decrease in the perception of pain during dental treatments is able to reduce the onset of anxiety among dental patients, and it is fundamental in clinical practice. Local anaesthetics are reliable and efficient drugs, but clinicians should be aware that complications may occur. When performing a local anaesthetic technique in a dental setting, systemic to loco-regional complications may arise. According to Haas, adverse events due to anxiety are the most common phenomena associated with local anaesthetic injection. The affected subject usually experiences syncope, but a wide range of symptoms may appear as well. Additionally, allergic reactions may happen, even if the incidence of allergies to amide local anaesthetics is less than 1%. These manifestations should be also put in differential diagnosis with anxiety-induced events. In addition, a local anaesthetic may be toxic if a high concentration of the agent is reached in the bloodstream, especially if multiple injections are performed or because of an inadvertent intravascular injection. Another adverse reaction, mainly associated with some anaesthetic agents, is methemoglobinemia. This event is caused by an excess of anaesthetic agent metabolites, resulting in systemic cyanosis. Prolonged anaesthesia or paraesthesia of the tongue or lip has been documented as well. It is mostly transient, but it may become permanent with the lingual nerve more commonly affected than the inferior alveolar nerve. Other reported complications comprise:

- Facial nerve paralysis due to the inoculation of an anaesthetic agent into the capsule of the parotid gland, with a transient inability to close the ipsilateral eye, with an intact corneal reflex.
- Post-injection trismus, possibly due to hematoma formation, infection, multiple injections or an excessive volume of local

anaesthetics.

- Pain from the inoculation of the local anaesthetic agent, caused by the rapid injection of the anesthetic into the tissue or by the shape of the needle.
- Post-injection infection, due to the contamination of the needle.
- Needle fracture and other complications such as edema, hematoma, gingival lesions, soft tissue injury and taste alteration.

In general, injection techniques and sedative arrangements are the main variables while performing local sedation, as they assume an unequivocal part in the accomplishment of sedation itself. The Halstead, Vazirani-Akinosi, and Gow-Gates methods are a portion of the depicted strategies accessible for the sedation of the Inferior Alveolar Nerve (IAN). An IAN block is ordinarily utilized in dental practice; however, a high failure rate has been accounted for, arriving at 20-47%. Regardless of whether these strategies detailed different achievement and disappointment rates, they are as yet utilized based on the clinical circumstances and practitioner's ease. Additionally, numerous expediciencies were proposed to improve IAN block success rates, like growing new sedatives, changing the patient's position, and changing the medication measurements [2-5].

References

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