

Inferior alveolar nerve block for the treatment of teeth presenting with irreversible pulpitis: A systematic review of the literature and meta-analysis.

[Corbella S](#), [Taschieri S](#), [Mannocci F](#), [Rosen E](#), [Tsesis I](#), [Del Fabbro M](#).

Abstract

OBJECTIVE:

The objective of the present systematic review was to evaluate, in patients with irreversible pulpitis affecting mandibular posterior teeth, if premedication with nonsteroidal anti-inflammatory drugs can increase the efficacy of inferior alveolar nerve block (IANB) if compared to placebo administration; if one anesthetic agent is more effective than another; if 1.8 mL injection is more effective than 3.6 mL injection to increase the efficacy of IANB; and if supplementary buccal injection is able to increase the efficacy of IANB as compared to a negative control/placebo group.

DATA SOURCES:

Randomized controlled clinical trials investigating different aspects (technique, premedication with anti-inflammatory drugs, different anesthetic agents) were searched. Success of IANB, as defined in the studies, was considered as the primary outcome. A meta-analysis was performed evaluating relative risks (RRs). Electronic databases (Medline, Embase, Cochrane Central) were searched after preparation of an appropriate search string. After application of selection criteria, a total of 37 studies were included; 19 of them were considered in the meta-analysis. There was evidence of a difference in favor of the use of premedication with anti-inflammatory drugs (RR, 1.80; CI 95%, 1.50-2.14; $P < .0001$). There was no evidence of a difference between articaine and lidocaine (RR, 1.05; CI 95%, 0.91-1.21; $P = .94$). With regard to the volume of anesthetic infiltrated, the computed RR was 1.17 (CI, 0.73-1.88) without any significant difference between the use of one or two cartridges ($P = .52$). The estimated RR for a supplementary buccal infiltration was 1.56 (CI, 1.00-2.42; $P = .05$).

CONCLUSION:

The use of premedication with anti-inflammatory drugs before IANB can increase the efficacy of the IANB. The type of anesthetic agent, the volume of anesthetic, and the use of a supplemental buccal infiltration do not seem to affect the efficacy of anesthesia.

PMID:

27834417

DOI:

[10.3290/j.qi.a37131](https://doi.org/10.3290/j.qi.a37131)

