



Preoperative oral medication of combination of ibuprofen and dexamethasone can improve the anesthetic success rate of inferior alveolar nerve block in patients with symptomatic irreversible pulpitis

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I am delighted to write an editorial commentary for “Evaluating Combined Effect of Oral Premedication with Ibuprofen and Dexamethasone on Success of Inferior Alveolar Nerve Block in Mandibular Molars with Symptomatic Irreversible Pulpitis: A Prospective, Double-blind, Randomized Clinical Trial” published in the May 2021 issue of *the Journal of Endodontics* (1). The paper has been authored by a dear friend (Rakesh Singla). The article deals with the evaluation of the effect of administration of oral premedications on the success of inferior alveolar nerve block (IANB) during endodontic management of mandibular molars with symptomatic irreversible pulpitis (SIP).

Mandibular molars with inflamed pulps often present a challenge to the clinician. In the past decade, a lot of endodontic literature has been dedicated to the efforts in improving the success rates of mandibular anesthesia. One possible (and extensively reported) option to improve the success rates of IANB is to give a preoperative dose of NSAIDs (non steroidal anti inflammatory drugs). The literature provides conflicting results. One of our articles reported that preoperative oral ibuprofen or ketorolac does not significantly affect the success rate of IANB in patients with SIP (2). Similar evidence has been reported by other clinical trials (1,3-6). Other trials have reported in favor

of preoperative medications (7-9). A recent systematic review and meta-analysis (of 13 randomized controlled trials) concluded that NSAIDs and ibuprofen (>400 mg/d) increased the anesthetic success of IANB in patients with SIP (10).

In the present manuscript, a total of 94 patients were divided into four groups depending upon the type of preoperative medication: placebo, 0.5 mg dexamethasone, 800 mg ibuprofen, or a combination of 0.5 mg dexamethasone and 800 mg ibuprofen. The patients received an IANB of 2% lidocaine with 1:200,000 adrenaline. Endodontic access and root canal instrumentation were attempted. The success was defined at a pain score less than 55 on HPVAS (Heft Parker visual analog score). The failed cases were managed by repeated IANB, intraosseous, intraligamentary, or intra-pulpal injections. The data from the current manuscript suggest that the individual use of 800 mg of ibuprofen or 0.5 mg of dexamethasone is statistically similar to placebo. A combination of both drugs gave significantly better results. Another important finding in the current study is the high success rates of 75% in the placebo group, whereas success rates of up to 40–50% have been reported in the majority of literature dealing with mandibular molars with SIP (5,11-13).

The results of this study suggest that oral ibuprofen or dexamethasone alone may not be able to improve the success rates of IANB. It should be noted that the ibuprofen group was successful in 85% of cases with SIP, which is equivalent to success rates achieved using intraosseous injections in other clinical studies (14). The authors have used a methodology similar to previous studies dealing with the patients with SIP (11). The diagnosis of SIP was based upon the patient response to electric pulp sensibility tests and thermal tests. A plausible limitation of this study is the limited sample size (20–23 patients in each group). The authors concluded that a combination of preoperative ibuprofen and dexamethasone significantly improved the success rate of IANB in mandibular molars with SIP. The authors further suggested future trials with a large sample size. This brings us back to the same question: should we prescribe oral NSAIDs before initiating endodontic treatment in a patient with SIP?

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