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Alprazolam role in the analgesic effect of ibuprofen on postendodontic pain

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Statement of the Problem: Postendodontic pain (PEP) has always been a major problem for patients and dentists and NSAIDs are being used to relieve PEP and it is supposed that some benzodiazepines may potentiate facilitate the analgesic effects of the NSAIDs. This study was conducted to evaluate the effect of alprazolam on the analgesic effect of ibuprofen in PEP treatment.

Methodology & Theoretical Orientation: This randomized double-blind clinical trial was conducted on 45 patients aged 20-45 years who were subjected of root canal treatment. A written informed consent was obtained from each patient. The subjects were randomly divided into three groups' placebo, ibuprofen (400 mg) and alprazolam (0.5) mg + ibuprofen (400 mg). The intensity of pain was recorded using visual analog scale (VAS) at 4, 6, 12, 24, 48 and 72 hours after drug administration.

Findings: Of the participants, twenty six (57.8%) were males and 19 patients (42.2%) were females. Four hours after starting treatment, the VAS scores in the placebo and ibuprofen -treated groups were significantly higher than ibuprofen and alprazolam+ibuprofen groups (4.93±1.16, 3.67±1.88 and 2.67±1.11, respectively, $p<0.0001$). The VAS scores in alprazolam + ibuprofen group (2.33±1.05) were significantly lower at six hours after treatment when compared to the other groups (Ibuprofen: 3.00±1.36 and placebo: 3.08±1.74, P=0.002). This decrease in VAS score sustained to 12 hours after the start of alprazolam + ibuprofen treatment when compared to ibuprofen or placebo receiving group alone ($p<0.003$). The average pain score in female patients who received alprazolam + ibuprofen was significantly lower than males at 12 hours (1.3±0.6 vs. 2.14±0.9, P=0.002) and 24 hours after treatment (0.88±0.6 vs. 1.86±0.9, P=0.003).

Conclusion & Significance: According to the results, it can conclude that alprazolam may enhance the analgesic efficacy of ibuprofen in postendodontic pain.

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