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Postoperative analgesia after lower third molar surgery: contribution of the use of long-acting local anesthetics, low-power laser, and diclofenac.

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OBJECTIVES: Postoperative pain is a common phenomenon after surgical extraction of lower third molars (LTM), and its successful control is an essential part of routine oral surgery. The aims of the study were twofold: (1) to evaluate the postoperative analgesic efficacy, comparing long-acting and intermediate-acting local anesthetics; and (2) to compare the use of low-power laser irradiation and the nonsteroid anti-inflammatory drug diclofenac, which are claimed to be among the most successful aids in postoperative pain control. **STUDY DESIGN:** A twofold study of 102 patients of both sexes undergoing surgical extraction of LTM was conducted. In the first part of the study, 12 patients with bilaterally impacted LTMs were treated in a double-blind crossover fashion; local anesthesia was achieved with 0.5% bupivacaine plain or 2% lidocaine with 1:80.000 epinephrine. In the second part of the study, 90 patients undergoing LTM surgical extraction with local anesthesia received postoperative low-power laser irradiation (30 patients) and a preoperative single dose of 100 mg diclofenac (30 patients), or only regular postoperative recommendations (30 patients). **RESULTS:** The results of the first part of the study showed a strikingly better postoperative analgesic effect of bupivacaine than lidocaine/epinephrine (11 out of 12; 4 out of 12, respectively, patients without postoperative pain). In the second part of the study, low-power laser irradiation significantly reduced postoperative pain intensity in patients premedicated with diclofenac, compared with the controls. **CONCLUSION:** Provided that basic principles of surgical practice have been achieved, the use of long-acting local anesthetics and low-power laser irradiation enables the best postoperative analgesic effect and the most comfortable postoperative course after surgical extraction of LTMs.