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Clinical study of the gingiva healing after gingivectomy and low-level laser therapy.

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Objective: The purpose of this study was to investigate gingival healing after gingivectomy and adjunctive use of low-level laser therapy (LLLT). **Background Data:** LLLT has been used in animal experiments to examine the influence of laser radiation on the wound healing process since the 1960s. However, clinical trials in dentistry are scarce, and most of them refer to treatment after extraction of the third molars, with only a few reports in the area of periodontics. **Methods:** Twenty patients with periodontal disease were selected, and treatment was planned for gingivectomy to bilateral maxillary and mandibular premolar teeth. After surgery, one side was submitted to LLLT using a 685-nm wavelength, output power of 50 mW, and energy density of 4 J/cm². The other side was used as the control and did not receive laser irradiation. Healing was evaluated, clinically and biometrically, immediately post-surgery and at days 3, 7, 14, 21, 28, and 35. Results were submitted to statistical analysis. **Results:** Biometrical evaluation indicated a significant improvement in healing for the laser group at 21 and 28 days. Clinical evaluation showed better repair for the laser group, mainly after the third day. **Conclusion:** LLLT was an effective adjunctive treatment that appeared to promote healing following gingivectomy.