

## The Comparison between Efficacy of 980 and 810 Nanometer Diode Laser on Gingival Pigmentation Removal

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### Abstract

**Background and Aim:** Although physiological gingival pigmentation is not pathologic, but cause esthetic consideration especially in laughing and speaking. For resolving of this pigmentation, some different methods such as gingival graft, gingivectomy, electrosurgery, abrasive with diamond burs, cryosurgery and laser therapy are used. The aim of this study was to evaluate the effects of 810nm and 980nm diode laser on size of the lesion after treatment of gingival pigmentation.

**Materials and Methods:** This study was a double blind clinical trial study. In this study, 24 patients (6males, 18 females) ranging in age from 19 to 45 years who were eligible for inclusion, were selected. Because oral pigmentation is often symmetrically, a jaw quadrant by 810nm diode laser and another quadrant by 980nm diode laser were randomly chosen to laser therapy. Then, the size of lesions was measured by AutoCAD software before surgery, 2 weeks, 4 weeks and 6 weeks after surgery. Data were analyzed by Kolmogorov-Smirnov, T and Friedman tests.

**Result:** The results of this study showed that there was not significant differences between size of pigmentation before surgery, 2 and 4 and 6 weeks after surgery by 810 and 980 nm diode lasers. (P>0.05) Also there was not any sign of recurrence from second until sixth weeks.

**Conclusion:** The results of this study showed that there was not significant differences in treatment of oral pigmentation by 810nm and 980nm diode lasers.

**Keywords:** *Gingival pigmentation, Diode laser, Depigmentation*

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