

***“Treatment of gingival hyperpigmentation with Diode Laser  
and Conventional surgical method -A comparative study.”***



By

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## **ABSTRACT**

### **BACKGROUND AND OBJECTIVES:-**

Gingival melanin pigmentation may be seen across all races and at any age, and it is without gender predilection. Although melanin pigmentation of the gingiva is completely benign and does not present a medical problem, patient's complaint of "Black Gums" is common due to their unacceptable aesthetics which demands cosmetic therapy.

Many attempts have been made in the past to answer this cosmetic demand and eliminate these dark patches of pigmentation on the facial aspects of gingiva. Procedures which include non surgical and surgical techniques like split thickness epithelial excision, gingival abrasion, free gingival grafts, cryosurgery, laser therapy etc.

The objective of this study was to determine the efficiency of Conventional Surgical scalpel method and Diode laser method for the treatment of gingival pigmentation and to compare the efficiency of these two techniques and the rate of repigmentation.

### **Method:**

A total of 14 subjects (7 Males & 7 Females), aged between 18 to 30 years, with an aesthetic complaint of hyperpigmented gingiva on the facial aspect of the maxillary anteriors were included in this study. The patients were selected from Outpatient Department of Periodontics, Govt. Dental College & Hospital, Hyderabad.

A split mouth design in relation to maxillary anteriors was considered. Right quadrant was chosen for Diode laser method and the left quadrant for Conventional surgical scalpel method. The total surface area of pigmentation was measured with the help of 5 standardized photographs for each patient, i.e., preoperative, postoperative after

10, 30, 60 and 90 days which was then calculated with the help of a photo imaging software.

### **Results:**

The results of this study indicated that both, Conventional surgical scalpel method as well as Diode laser method were efficient for depigmentation of the gingiva. The rate of recurrence of pigmentation was high with the Diode laser method when compared with Conventional surgical scalpel method. The wound healing was delayed in Diode laser method when compared to the conventional surgical scalpel method following the gingival depigmentation. Diode laser method was painless when compared to Conventional surgical scalpel method in gingival depigmentation.

### **Conclusion:**

It can thus be concluded that there is no statistical significant difference between Conventional surgical scalpel method and Diode laser method in terms of efficiency and the rate of repigmentation.

**Keywords:** Melanin pigmentation; Diode laser; surgical scalpel method; Depigmentation; Repigmentation.

