Significance of Using Diode Laser in Routine Dental Treatments: Case Reports

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Abstract:

Introduction: The integration of laser technology in dental care improves treatment outcomes by offering less invasive and more comfortable alternatives to traditional methods, especially for restorative procedures. Diode lasers enhance gingival retraction by ensuring a cleaner, more accurate impression without the risk of bleeding or tissue damage associated with retraction cords. Additionally, lasers facilitate a dry working field during restoration of carious lesions, reducing the risk of contamination and improving composite filling success. This technology enhances precision, adaptability, and overall patient experience in dental treatments.

Case presentations: Seven cases demonstrated the effectiveness of diode laser various restorative treatments such as removing excessive gingiva in class 2, class 5 to facilitate composite restorations, and maintaining hemostasis during gingival retraction prior to taking impressions. Also, to highlighted diode laser's role in enhancing marginal fit and achieving clear finishing lines for crown fitting.

Objective: To case report different techniques highlighting the advantages and the practicality of using diode laser and for impression taking following subgingival finish line tooth preparation, and in carious lesions composite filings.

Conclusion: Laser technology proves to be an effective tool for gingival retraction and restoration of marginal carious lesions. It enhances impression accuracy, prevents composite contamination, and saves time. Its reliable performance and minimal soft tissue damage make it a strong alternative to traditional techniques in routine dental treatments.

Keywords:

Diode laser, gingiva, retraction, hemostasis.