Dental lasers and Periodontics—What do we know, and what do we do?

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- Periodontal and peri-implant disease therapy continues to evolve with new methodologies, medications, and instrumentation added to the conventional armamentarium. Dental lasers have been used both adjunctively and alone in the protocol for this therapy—both for initial treatment, termed ‘non-surgical, and for subsequent surgery.

- Likewise, periodontal surgical procedures for elective aesthetic dentistry can beneficially utilize lasers for both soft tissue and osseous modifications.

- Clinical studies and basic investigations have shown that laser photonic energy has been a useful addition to increase the effectiveness and outcomes of treatment of the periodontium.

- The term, ‘non-surgical therapy’ is defined as: the treatment necessary to remove as much calculus as possible, to disrupt or eliminate the biofilm and accompanying microbes, and to reduce inflammation contributing to periodontal and peri-implant disease as initial therapy.

- This initial therapy is usually performed in a general dentist office. Occasionally, there might be immediate referral to a periodontist.

- In accordance with the scope of practice and the State Dental Practice Act, a dental hygienist may provide this initial therapy.

- A primary component of this initial therapy is the patient’s understanding of the regimen of oral hygiene needed, as well as the ability of that patient to perform what’s required.

- The key word for our discussion about dental lasers for non-surgical, initial therapy is ADJUNCTIVE.

- With one exception, current dental lasers will not remove calculus from the root or implant surface.

- Therefore, conventional instrumentation is used for scaling of those accretions.

- In general, the dental laser’s main target is the soft tissue lining the periodontal pocket or the mucosal defect around the implant fixture.

- Additional adjunctive therapy, such as locally delivered anti-infectives can also be added to the non-surgical protocol.

- After initial therapy and evaluation, a surgical phase of therapy may be necessary.

- An understanding of laser fundamentals is essential for safe and effective treatment.

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