Results: The Mann-Whitney test showed that the pain experienced by patients at each time record and the maximum NRS pain score significantly differed among the two groups. In this respect, these values were significantly lower in the tested group at each time record with a P value ≤0.05.
Conclusion: LED photobiomodulation with ATP38® is effective in alleviating the intensity and the duration of pain experienced by young patients undergoing rapid palatal expansion.

Whitening with 980 nm diode laser in a dyschromic devitalized tooth with aesthetic value: long-term success

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Aim: In our society, the progress of aesthetic standards has led to increasing demands from patients to have white and healthy teeth as an index of beauty and health. The main advantages of the laser bleaching technique include greater safety and control, as well as the prevention of tissue damage, the reduction of application times and greater patient satisfaction. Numerous studies in the literature underline that bleaching with diode laser is a safe. The purpose of this in vivo study was to assess the whitening effect of the 980 nm diode laser in combination with the whitening gel, containing hydrogen peroxide, in the discoloration treatment of a dental element undergone to endodontic therapy.
Methods: A 40-year-old female patient in good systemic health came to our attention for an aesthetic problem on the dental element 3.1, due to the dyschromia induced by endodontic treatment. Upon clinical examination, the tooth appeared dark brown, tending to black in some areas. Subsequent radiographic evaluation revealed the impossibility of the whitening treatment with conventional protocol, through lingual access to the endodontic space, to place the whitening peroxide intra-coronally. This was due to the small thickness of the root and its high risk of fracture following. For this reason, an assisted laser bleaching with 980 nm diode combined with a 37.5% hydrogen peroxide was evaluated. The patient signed the consent form before beginning treatment. The treatment was performed in a single session. Firstly, all dental surfaces have been cleaned to eliminate the bacterial biofilm. Subsequently, light-cured rubber dam was applied to protect soft tissues from hydrogen peroxide. The whitening gel was applied in a layer 1.5-2mm thick on the buccal surfaceof 3.1, 3.2 and 4.1. A transparent film was applied on the gel to block the hydrogen peroxide molecules on the enamel, avoiding their dispersion towards the outside and promoting the complete diffusion and penetration through the enamel prisms in the dyschromic dentine. The bleaching agent was activated by 980 nm diode laser using defocused handpiece in continuous mode and output power of 3 W on 3.1 and 2 W on 3.2 and 4.1. The enamel surfaces were scanned continuously. The vestibular surfaces of each treated element was radiated for 30 seconds. Finally, 20 minutes after applying the whitening gel,the surface of each dental element was rinsed with water and dried with an air spray to remove it completely.
Result: Immediately after the treatment (T0) no evident result was found, at the 1-week check (T1) the patient presented a uniform coloring of the dental elements. A second laser assisted bleaching treatment was not necessary. After six months of follow-up, there was no recurrence of the dyschromia, the treatment was effective, quick in results and long lasting.
Conclusion: This case has shown that laser assisted whitening treatment can be considered a valid alternative to conventional internal whitening in dyschromic devitalized teeth due to its efficacy, minimally invasive, safety, rapidity and stability of the results obtained for greater patient comfort. This treatment is not only aesthetic but also conservative as it has avoided the aesthetic veneers that would have required a minimum sacrifice of dental and gingival tissue.

Effectiveness of a novel gel containing aminolevulinic acid and red light irradiation on gram-negative and gram-positive bacteria

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Aim: The combination of aminolevulinic acid and red light irradiation has been largely used in dentistry for removing no malignant lesions of the oral cavity and also the antibacterial activity against gram-