carried out before the intervention (Control) and after the laser application (Laser Group). The samples were inoculated into Petri dishes for visual counting of colony-forming units (CFU). After tabulation and logarithmic transformation of the data obtained, the ANOVA test (General Linear Model) was applied to verify the existence of a significant difference between the groups.

Results: The Laser Group showed a statistically significant decrease of CFU (ANOVA F=58.23; p<0.00) compared to the Control Group.

Conclusion: The proposed Er:YAG irradiation protocol using sub-ablative DE significantly reduced CFU in patients with fixed orthodontic appliances.

Ariane Venzon da Naia Sardo, Guilherme de Souza Cabral Muzy, Daniela Fátima Teixeira Silva, Denise Maria Zezell (Brazil)
Category: Clinical human studies
Title: REMISSION OF PERIORAL DERMATITIS IN 48 HOURS USING PDT: A CASE REPORT

Aim: The objective was to locally treat perioral dermatitis (POD) with photodynamic therapy (PDT) in a patient with complaints for more than 30 days.

Material and methods: A female patient, 32 years old, with bilateral POD lesions that extended from the chin skin to the alar base region, intensely erythematous, with scaly and bleeding spots, reporting a slight itching sensation, but with intense burning and significant social embarrassment. She was advised to stop using any cosmetic product, except her daily use liquid soap, and protect herself from sunlight with physical means. She was treated with two sessions of PDT with 10 ml of 0.1% aqueous methylene blue (MB). After 5 min of contact between the skin and the MB, a diode laser, continuous mode, with 660 nm, beam output area of 0.19 cm^2 and respective power of 50 mW (Laser Duo, MMO, Brazil), was used to irradiate 6 points on each side of the face, for 180 s and 9 J per point, resulting in 263 mW/cm^2 and 47 J/cm^2 per point. Each session lasted 2,160 s, with two sessions spaced 24 hours apart, totaling 94 J/cm^2 per point.

Results: After 48 h of the first session, the patient presented significant clinical remission of the erythema and evident improvement in the visual appearance of the skin, also reporting a complete absence of symptoms. After nine months, a new follow-up appointment was made and the patient did not report any recurrence and, clinically, the skin remained intact.

Conclusion: Unlike conventional treatment, which can last more than 30 days and is often associated with the use of topical formulations based on immunosuppressants and systemic antibiotics, PDT was effective in reducing signs and symptoms related to POD in 48 h and locally.

Beatrice Spaggiari, Ilaria Giovannacci, Marco Meleti, Paolo Vescovi (Italy)
Category: Clinical human studies
Title: NONSURGICAL LASER ASSISTED APPROACH OF RADICULAR CYSTS

Aim: Evaluate the possibility of enhancing the effects of irrigants with the support of lasers technologies in nonsurgical Endodontic treatment.

Material and methods: In this case series three different kind of lesions have been treated. Patients, females, were between 16 and 30 years old. All Endodontic therapies were performed in orthograde way, with manual instruments and Nichel-Titatium rotary instruments. Irrigation protocols were based on the use of 5% sodium hypochlorite (NaOCl) and 17% ethylenediamine tetraacetic acid (EDTA), according to literature, enhanced by different laser technologies. Patient 1 presented a radicular cyst of element 46: decontamination was associated with Nd:YAG laser activation of 5% NaOCl. The fiber (320 μm) was located inside the canal 1mm shorter than working length and activated in coronal direction. This procedure lasted 5s and was repeated 4 times (15Hz, 1.25W, LightWalker Fotona, power intensity1555 W/cm^2, total fluence 167.94 J/cm^2). Patient 2 presented a huge cystic lesion on element 11: in this case Nd:YAG laser was used as described before, but the fiber was located 5mm shorter than working length due to the risk of extrusion of NaOCl. Patient 3 present an endo-perio lesion on element 42, resulting from a previous ineffective treatment: irrigation was enhanced with the support of laser Er:YAG (2940nm, LightWalker Fotona). The special tip SWEEPS (radial 400 2mm) was placed at the entrance of the canal and 5 irradiations (2 with EDTA + 3 with NaOCl) of 30s each with a rest time