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Congress Program

ISLD International Society for Laser Dentistry

dgl. Deutsche Gesellschaft für laser Zahnheilkunde e.V.

27th DGL ANNUAL MEETING

AALZ World Academy for Laser Education in Dentistry

6th INTERNATIONAL WALED CONGRESS

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16TH LASER DENTISTRY WORLD CONGRESS AACHEN

THREE DECADES OF LASER INNOVATION

1-3 OCTOBER 2018

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Maria Zaharieva Mutafchieva

Clinical and molecular effects of LLLT in the treatment of oral lichen planus

Introduction:
OLP is an autoimmune disease, in which T-Ly induce apoptosis of the basal keratinocytes. As a result diffuse erosive fields occur. It is assumed that the healing process requires an enhanced proliferation and block of cell death program.
Aim:
The aim of this study was to evaluate the effectiveness of LLLT in OLP patients and to study whether this therapy induces changes of cell proliferation and apoptosis.
Materials and Methods:
Twenty patients with histologically proven OLP underwent LLLT with diode laser (810nm), (0,50W, 30s, 1,2J/cm2), 3 times weekly for a month. The size and clinical scores of the lesions and pain level were recorded before and after therapy, using Thongprasom sign scoring and VAS respectively.
Biopsies were taken before and after therapy and analyzed immunohistochemically for expression of bcl-2 and Ki-67. A comparison was made with the level of these markers in normal oral mucosa taken from 10 healthy volunteer. The reaction intensity was measured using a semiquantitative scale.

Results:
The pain level, the size and clinical scores of the lesions decreased significantly. OLP lesions demonstrated lower staining for bcl-2 and Ki-67 in comparison with the healthy controls. After therapy the expression of bcl-2 increased significantly. An enhance in Ki-67 immunoreactivity was revealed predominantly in the erosive and atrophic epithelium.
Conclusions:
LLLT is likely to recover the impaired cell cycle mechanisms and proliferation of the keratinocytes in OLP, contributing to the improvement of the clinical features of the disease.
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Mariano Cutchurru

Lateral and crestal access to the maxillary sinus only with Er,Cr:YSGG laser

Flap and lateral opening maxillary sinus only with laser erbium Cr without drill
Flap less crestal opening maxillary sinus only with laser erbium Cr and PRF without drill
Less traumatic and better patient recovery

Mariella da Silva Gottardi

In vivo study of diode laser 940 nm operating in high intensity mode in the periimplantitis disease

The evolution of periimplantitis has been associated with several risk factors. The standard treatment consists on subgingival scaling and blasting with sodium bicarbonate. This 6 months longitudinal clinical study evaluated and compared two treatment methods: conventional as described and complemented by irradiation with high intensity diode laser (940 nm, Biolase) aiming to establish a more efficient periimplantitis management. After approval by the Human Research Ethics Committee, 20 patients of both sexes, with implants in function for at least 12 months and with diagnosis of peri-implantitis were selected and randomly distributed in two experimental groups. Ten of them were conventionally treated as control group, and the remaining ten were in the laser treated group (1W, 4.24kJ/cm2 energy density, pulsed mode, 30s, twice). There were six sites for treatment standardization: vestibular region (mesial, central and distal thirds) and buccal region (mesial, central and distal thirds). Results has shown that overall clinical evaluation has no significant difference between groups control and treatment. Less bleeding and suppuration, as shallower periodontal pocket indicated a decreasing tendency on laser treated group. Quantitation of total bacteria and Porphyromona gingivalis by real-time PCR shown that laser synergy is a complementary therapy that could act as an additional option to the conventional treatment in difficult response cases.

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