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Transcranial Laser Stimulation Improves Human Cerebral Oxygenation

Evaluation of Cell and Matrix Mechanics Using Fluorescence Excitation Spectroscopy: Feasibility Study in Collagen Gels Containing Fibroblasts



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were: control saline (C), MA (MA) MA + LLL (ML), MA + ET (ME) and MA + LLL + ET (MLE). The treatment was performed using ET moderate intensity (70% of maximal exercise test) on motor treadmill associated with LLL (660 nm, 05 mW, 2.5 J/cm<sup>2</sup>, 20 s, Area 0.04 cm<sup>2</sup>) for 2 months. After this period the functional capacity was assessed. Arterial pressure (AP) and heart rate (HR) were evaluated via catheters implantation in the carotid artery. Moreover, the leukocytes influx into the joint cavity was analyzed.

**Results:** The test for functional capacity showed improvement in ME group (15.45 ± 1.5 min) and MLE group (17.5 ± 2.0 min) compared to MA group (8.25 ± 0.8 min). Hemodynamic assessment for resting HR decreased in ME (324.87 ± 15 bpm) and MLE group (328.53 ± 19 bpm) compared to MA group (386.05 ± 29 bpm). Results from AP showed no difference among groups. Animals treated with zymosan showed a significant increase of leukocyte influx into the knee joint (MA: 471.7 ± 138 × 10<sup>-4</sup>/mL). All treatment caused a reduction in the leukocyte influx (ML: 109 ± 11 × 10<sup>-4</sup>/mL, ME: 165.5 ± 61 × 10<sup>-4</sup>/mL, MLE: 81.2 ± 15 × 10<sup>-4</sup>/mL) compared to MA.

**Conclusion:** The combination of ET and photobiomodulation showed an increase in functional capacity and improvement of heart function and inflammation in the rat knee.

## WOMEN'S HEALTH

### #LB39

#### TREATMENT OF COEXISTENT LICHEN SCLEROSUS AND VULVO-VAGINAL ATROPHY WITH FRACTIONAL CO<sub>2</sub> LASER THERAPY

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**Background:** To evaluate the safety, feasibility, and clinical response of the treatment of coexistent Lichen Sclerosus (LS) and Vulvovaginal atrophy (VVA) with fractional CO<sub>2</sub> laser therapy in an office setting.

**Study:** Fifteen patients with symptoms of VVA as well as a history of biopsy proven LS were treated in the office setting with fractional CO<sub>2</sub> laser using the SmartXide, DEKA-Italy. All patients had either failed or were dissatisfied with more conventional treatments of both conditions. The treatment protocol was three treatment sessions at 6-week intervals (40–50 days). At each treatment, patients underwent treatment of vaginal walls with a 360° (pyramid) probe as well as treatment of all visibly affected vulvar tissues with an external probe. Topical EMLA cream was applied to vulvar tissue for 12–15 minutes prior to treatment. Six weeks after completion of all three treatment sessions, patients were asked to rate their overall global impression of symptom improvement on a scale of 0% to 100%. Patients were also asked to rate their satisfaction with the therapy as very satisfied, satisfied, or not satisfied.

**Results:** All 15 patients (100%) completed their three treatments sessions in an office setting with no complications or adverse events. The mean improvement was 65% with a range of 10% to 100%. Fourteen of 15 patients reported that they were very satisfied or satisfied.

**Conclusion:** Our clinical series suggests that treatment of coexistent VVA and LS simultaneously in the office setting with fractional CO<sub>2</sub> dual probe therapy is safe and well tolerated by patients and leads to significant quality of life improvement in a majority of patients. We feel that this therapy is a nice addition to the armamentarium of therapies for these two conditions.

### #LB40

#### AN ASSESSMENT OF THE SAFETY AND EFFICACY OF THE SMARTXIDE<sub>2</sub> FRACTIONAL CO<sub>2</sub> LASER FOR THE TREATMENT OF VULVOVAGINAL ATROPHY

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**Background:** The purpose of this study is to assess the safety and short term efficacy of a fractional CO<sub>2</sub> laser ("SmartXide<sup>2</sup>-V2LR", DEKA M.E.L.A., Florence – Italy, MonaLisa Touch) in the treatment of genitourinary symptoms of menopause (GSM). All patients had to pay out of pocket for this procedure, hence we also assessed whether patients felt the cost of treatment was worth the outcome they obtained.

**Study:** We performed a retrospective cohort study of patients who completed a course of three MonaLisa Touch Laser treatments between January 2015 and November 2015 at a single institution. We collected information via chart review and by contacting patients for telephone interviews. P value was defined as **Results:** Seventy-four patients were identified as completing a course of three treatments, of which to date 33 have been contacted and have completed a phone interview. All procedures were performed in an office setting with no patient requiring any pre or post-treatment analgesia except for topical Emla cream in a select number of women. There were no adverse events requiring medical attention. Patients had significant improvement in vaginal dryness (p = 0.04). Sequential improvement in dyspareunia was noted, with 75% of patients noting improvement after their first treatment. There was a significant increase in frequency of intercourse (p < 0.0005). The majority of patients rated their level of satisfaction with the treatment as acceptable or satisfied (72%). All patients were charged \$1,800 (\$600 per treatment); 66% felt the cost was acceptable and that the treatment was worth the out-of-pocket expense.

**Conclusion:** The fractional CO<sub>2</sub> laser is a safe and effective treatment of GSM with a greater improvement in symptoms in those patients with more severe symptoms prior to treatment. The majority of women felt the out of pocket expense was worth the outcome they obtained.