18024

Laser assisted liposuction: A 7-year experience with 1638 different patients

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Background: Laser liposuction is a minimally invasive technique removal of localized fat deposits. Nd:Yag laser is used to liquefy fat, before it is removed by the aspiration cannula. The laser energy leads to collagenesis and skin tightening. We evaluated the efficacy and safety of 1064 nm Nd:YAG laser in the treatment of local fat.

Methods: 1638 different patients, 967 women and 671 men, were treated in our clinic during the years 2011-2018. They underwent a laser assisted lipolysis under tumescent anesthesia. The liposuction was performed with a subcutaneous 1064 nm Nd:YAG laser, power adjusted at 6 Watt and Frequency at 40 Hz. The laser energy was delivered via a 300 μm optical fiber. The average energy delivered was 3590 J per area. The most common areas treated were abdomen, thighs and waistline. A compression garment was recommended for 30 days.

Results: Evaluation of the results was performed by digital photos, measurements and the Full Body Composition Analyzer before 1, 6, and 12 months after treatment. All patients filled in a Dermatology Life Quality Index questionnaire before and one year after the liposuction. One-month follow-up revealed an average circumference reduction of 4 cm. Results after 6 months showed a significant clinical improvement in 68% of the patients. Twelve months later the satisfaction rate was over 89%. Except for bruises, no significant complications were mentioned.

Conclusions: Laser-assisted liposuction constitutes a safe and effective treatment for resistant local fat, providing results similar to those of traditional liposuction with the additional advantage of skin tightening.

Commercial disclosure: None identified.

18063

Geographic distribution, climate, and soil type of mycetoma cases in northeast Mexico

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Background: Mycetoma is a chronic infection of subcutaneous tissue, which can involve deep structures and bone. There is an epidemiologic association with the environment but there are still knowledge gaps in the identification of the habitat of actinomycetes.

Methods: An ambispective descriptive study of patients with a confirmed diagnosis of actinomycetoma seen at a referral center from 2009 to 2018 in northeast Mexico was performed. The biophysical characteristics including temperature, precipitation, soil type, vegetation, and etiologic agent cases were determined.

Results: A total of 31 patients with actinomycetoma were included. A total of 23 (74.2%) cases were by *Nocardia brasiliensi*s, 5 (16.1%) by *Actinomadura madurae*, 2 (6.5%) by *Nocardia* spp, and 1 (3.2%) by *A. pelletieri*. Previous thorn trauma with Acacia or Prosopis plants was referred by 35.4% of subjects. We identified two disease cluster areas, one in Nuevo Leon, with a predominantly kastanozems soil, a mean annual temperature of 22° and a mean annual precipitation of 585.2 mm. The second cluster was in San Luis Potosí in lithosols soil, with a mean annual temperature of 23.5°, and a mean annual precipitation of 635.4 mm; in this area, all the cases were caused by *N. brasiliensis*.

Conclusions: Mycetoma cases in northeast Mexico occurred in places with a mean annual temperature between 18.9°C and 27.1°C, with a variable mean annual precipitation from 297 mm to 3048 mm. Mapping mycetoma aids in the detection of disease cluster areas and the development of public health strategies.

Commercial disclosure: None identified.

18038

Reproducibility of Myoton and durometer devices to quantify skin stiffness and hardness in sclerotic chronic graft-versus-host disease

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Introduction: Skin is the most commonly involved organ in chronic graft-versus-host disease (cGVHD). Sclerosis is a common manifestation associated with significant morbidity, but there is an unmet need for quantitatively measuring sclerosis to track the progression of disease. Myoton and durometer are 2 candidate technologies to measure skin biomechanical properties. However, the reproducibility of these devices in sclerotic cGVHD is critical missing information in designing longitudinal studies measuring sclerosis in cGVHD patients.

Methods: Seven sclerotic cGVHD patients were measured by three observers with Myoton and durometer on 20 body sites. The intraclass correlation coefficients (ICC) was used to estimate clinical repeatability to differentiate among patients. Mean coefficient of variation and minimal detectable change (MDC95) were calculated to estimate device repeatability within patients.

Results: Patient overall hardness/stiffness interobserver ICCs were 0.92 [95% confidence interval 0.82-1.00] for Myoton and 0.82 [0.61-1.00] for durometry. The Myoton had superior reproducibility to durometry in calves and upper arms, but was inferior in the dorsal forearms. Coefficients of variation across observers were under 10% and the overall normalized, MDC95 was 22% to 23% for both devices.

Conclusions: Both devices exhibit high reproducibility in sclerotic cutaneous cGVHD, and the Myoton trended towards higher reproducibility when compared with the durometer. The interobserver ICCs of both devices are significantly higher than the typical range of ICCs (0.21-0.60) associated with clinical examination—based measurement of moveable sclerosis. Prospective longitudinal study is warranted to validate the use of skin stiffness measurements to monitor disease progression and treatment response.

Commercial disclosure: None identified.

18078

Evaluation of the efficacy of an exfoliating cleanser and urea-containing cream on keratosis pilaris using clinical and 3D image-based analysis

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Objective: Individuals with keratosis pilaris (KP) can be affected emotionally, often trying to conceal the evident keratin plugs and follicular erythema associated with the condition. Hyperkeratotic skin can benefit from topical formulations that hydrate to soften keratin and promote desquamation. Herein, we describe the efficacy evaluations for a daily ceramide-containing regimen including an exfoliating cleanser and cream with urea in women with KP on their upper arms or outer thighs. A 3D image-based analysis was employed to assess the texture of skin with KP for the first time.

Methods: This study included 45 women ages 18-50 years with moderate tactile and visual roughness additional mild to moderate follicular erythema on the upper arms or outer thighs diagnosed as KP by a dermatologist. Clinical efficacy was evaluated by expert dermatologist grading for skin texture, follicular erythema and dryness, additional self-assessment questionnaires at baseline, week 2, week 4, and week 8. Images were captured using a 2D Nomad Cam and 3D imaging system Primos Lite. Objective and subjective tolerance assessments were also performed at each study visit.

Results: Statistically significant improvements were observed in dermatologist graded skin texture (tactile and visual), follicular erythema, skin dryness and the overall healthy appearance of the skin condition at all time points. The 3D image analysis also showed a statistically significant reduction in the roughness parameter. Study subjects perceived an improvement in their skin quality. Global tolerance and self-assessment evaluations showed the regimen was well tolerated and well perceived by the study panel.

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