

Efficacy and Safety of the FOTONA TightSculpting® Method Used in Non-invasive Lipolysis and Skin Tightening

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Non-invasive body shaping is growing in demand. Many treatment options are being offered with promises that are unrealistic in many cases. The aim of this study was to investigate the efficacy and safety of combined treatments of 1064 nm Nd:YAG and 2940 nm Er:YAG (FOTONA SP Dynamis) in non-invasive lipolysis and skin tightening. Ten females were enrolled; the side of their waist or the lower part of their abdomen were treated.

In the first step we used 1064 nm Nd:YAG in PIANO mode with the S11-L-Runner scanning handpiece; the scanning surface was 78 mm x 84 mm and power flux density (fluence/treatment time) was 1.2 W/cm², at a fluence of 108 J/cm². The temperature of the skin surface was kept at 42 degrees Celsius for 8 minutes on each treated site. The skin temperature was checked by a special MatrixView temperature monitor. The second step was to apply SMOOTH mode using the 2940 nm Er:YAG laser and R11 handpiece with a spot size of 7 mm at a fluence of 2 J/cm² and 2 Hz frequency. Each woman was treated four times, every two weeks.

Body shaping and skin tightening were evaluated 2 weeks after the fourth laser treatment. The effects of body shaping from the combined laser treatment were measured by low-dose native CT, waist circumference measurement and comparative photo documentation, whereas body fat was monitored with bioelectric impedance and measurement of fat tissue with caliper fat clippers. The tissue firmness was measured by ultrasound elastography and by clinical assessment. We have found that this TightSculpting method significantly reduced the thickness of the fat tissue and enhanced the firmness of the skin.

The Challenge of using Er:YAG Laser for Achieving Mycological Cure in Onychomycosis

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The decision about the treatment and prognosis of onychomycosis nail clearing is not so simple and seems to be related to geographic area. The reason for this difference maybe climatological, cultural and technological (different laser systems). Laser therapy enables us to perform many approaches that are not accessible by conventional medications alone.

Mycological cure in onychomycosis by using Er:YAG laser and topical medication .

A series of eight patients with clinical and mycological evidence of severe onychomycosis underwent trephination of the diseased nail plates using an Er:YAG laser (SP Dynamis, Fotona, Slovenia), followed by daily applying of a topical antimycotic solution (Lamisil spray, Novartis, Switzerland). Three laser sessions were performed in intervals of 4-6 weeks. Mycological cure, defined as negative potassium hydroxide (KOH) microscopy and negative culture, was obtained in seven patients. The outcome in this small trial is very encouraging and promising. It emphasizes the fact that nail trephination with Er:YAG laser is a valuable tool in non-systemic antimycotic treatment for onychomycosis.

The presented protocol gives us a powerful tool for onychomycosis treatment. As yet, there are no similar prospective, randomized, comparative trials. We need more cases and studies in that way.

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