

## Non-ablative SMOOTH® Erbium Laser Treatment for Male Stress Urinary Incontinence

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A new treatment of intrinsic sphincter deficiency in females using non-ablative Er:YAG laser was recently proposed and the first clinical results seem promising, showing excellent improvement and practically no adverse effects. The proposed mechanism of action is the improvement of the mucosal component of the urethral sphincter caused by a controlled laser-produced tissue hyperthermia. The objective of our study was to evaluate the efficacy and safety of this new erbium laser therapy for the treatment of male stress urinary incontinence.

Male patients with stress urinary incontinence caused by radical prostatectomy, transurethral prostate resection and radiotherapy were included in this prospective study. The treatment consists of intraurethral laser irradiation of the external urethral sphincter. 2940 nm Er:YAG laser was used in its thermal-only SMOOTH® mode, delivering an average 120 J of non-ablative energy in multiple irradiation passes. 4 treatment sessions with one month interval were scheduled for all patients. Before the laser irradiation, local anesthesia (lidocaine cream) was applied into the patient's urethra. Treatment efficacy was evaluated by the reduction of the number of pads, and the patient's subjective assessment of improvement. Measurements of the efficacy as well as observation of adverse effects and discomfort during the treatment were performed at every visit.

So far we have treated 24 male patients suffering from SUI at a single medical center in Malaga, Spain over the period from June 2017 - February 2019. All but one patient improved immediately after the first session. The average number of pads per day was significantly reduced; for the first 10 patients it was reduced from 3.4 before the treatment to 1.7, 1.5 and 1.4 at the 2, 3 and 4 month follow-ups. 6 patients remained with only 1 pad/day and 2 patients were without pads at 4 months after beginning the therapy. All patients tolerated the treatment well and no adverse effects were observed. Most patients assessed their improvement as significant and were very satisfied with the treatment and the results.

This new non-ablative erbium laser therapy has shown good results in the treatment of male stress urinary incontinence and seems to be a promising minimally invasive alternative to existing therapies. Larger studies with more participants and longer follow ups are needed to allow for us to draw firm conclusions.

## Peri-implantitis: Non-surgical Combined Laser Treatment using GBT, Er:YAG, Nd:YAG

**Claudio Pasquale**

Implant treatments have taken on an ever larger role in the dental field and are associated with an extremely satisfactory success rate. Nevertheless, peri-implant pathologies are very frequent, and their peculiar characteristics and prevalence will be described. The dental professional needs to have available technologies to carry out non-invasive treatments, but which are effective in terms of decontamination, especially in the non-surgical field.

In this case the patient has diffuse peri-implantitis and a more serious situation in the V sextant sector. After rehabilitation took place years ago in an extra-EU country.

The aim of this treatment is to try to decontaminate the peri-implant pockets of this sector as much as possible so as not to force the patient to remove the implants.

The chosen working method is to combine different types of treatment in order to optimize the result. It was decided to combine Guided Biofilm Therapy (Perio); 2940 nm Er:YAG laser (perio) and 1064 nm Nd:YAG Laser.

The final results obtained are very satisfactory, with a good degree of decontamination without having made any surgical access. The 90-day follow-up demonstrates a successful treatment and the possibility for the patient to be able to dedicate optimal care to the affected peri-implant structures.

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