

Non-ablative Er:YAG Laser in the Treatment of Stress and Mixed Urinary Incontinence in 82 Women – Which Factors Influence the Efficacy of the Treatment?

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To determine the efficacy and to find out the predictive factors for the successful use of Er:YAG laser treatment in patients with UI.

In this retrospective study, we reviewed 82 patients with UI. Er:YAG laser treatment was applied and the patients were evaluated by ICIQ-SF and KHQ-UI before and after the procedure. The improvement rate was graded as no improvement (0-25%), mild improvement (26-50%), moderate improvement (51-75%), or high improvement (76-100%). The efficacy of the treatment was followed up as maximum improvement time (MIT) and total improvement time (TIT). SPSS-18 was used for the statistical analysis.

Forty-two of the patients were SUI and 40 patients were MUI. The mean scores of ISIQ-SF and KHQ-UI had significantly improved after the procedure. The SUI patients responded to the laser treatment significantly better than the MUI patients ($p=0.008$). The younger women had significantly better results ($p=0.008$). The premenopausal women had a better response to Er:YAG laser treatment than the postmenopausal women ($p=0.032$). The women in the early postmenopausal years significantly improved ($p=0.032$). BMI had a significant effect on UI in the Er:YAG laser treatment ($p=0.011$). The women having lower BMI had a higher survival probability ($p=0.029$). The energy expenditure of the total laser sessions might be a predictive parameter for the success of the Er:YAG laser treatment of UI ($p=0.059$). MIT and TIT were significantly longer among the patients in the high-improvement group than among those in the no- and mild-improvement groups (for MIT $p=0.000$ and $p=0.008$, for TIT $p=0.000$ and $p=0.005$).

Er:YAG laser definitely improves the conditions of

women with UI. The improvement is greater in women with SUI. Younger-aged, premenopausal or early postmenopausal women with normal BMI show a greater and longer duration of improvement. More laser energy applied gives better results. In our population, patients perceive that Er:YAG laser treatment is a definitive procedure among the treatment alternatives for UI. Before administering the laser treatment, we should understand the patient's expectation from the laser.

Er:YAG Laser Treatment in Women with Stress Urinary Incontinence after Hysterectomy: a Preliminary Study

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Hysterectomy is one of the most common gynecological surgeries. The incidence of urinary incontinence (UI) after hysterectomy is reported roughly as 10%. In this preliminary study, we investigate the effect of Er:YAG laser treatment on SUI patients.

Thirty-five SUI women without uterus and 34 SUI women with intact uterus were included into this retrospective analysis. The patients were evaluated by ICIQ-SF before and after the procedure. The improvement rates were graded as: no improvement (0-25%), mild improvement (26-50%), moderate improvement (51-75%), and high improvement (76-100%). The duration of the treatments' efficacy was evaluated based on follow-ups of maximum improvement time (MIT) and total improvement time (TIT).

In the hysterectomy group, the women in the moderate and high improvement group had a longer duration of improvement ($p=0.001$ for MIT and $p=0.012$ for TIT, respectively). There was not a significant differences between the women with intact uterus and those without uterus in terms of response to Er:YAG laser treatment of SUI.

Er:YAG laser treatment in SUI women without uterus is as efficient as in those women with intact uterus.