

Long term effects of non ablative erbium laser treatment of female stress urinary incontinence

Aleksandra Novakov Mikic¹, Brigita Bingold¹, Zdenko Vizintin²

1 Poliklinika "Novakov et al."v, Svetosavska 7, 21000 Novi Sad, Serbia
2 Fotona, 1000 Ljubljana, Slovenia

Hypothesis / Aim of the study

Stress urinary incontinence (SUI) is a common cause of urinary incontinence and is affecting large number of women influencing significantly their quality of life. There is a large range of therapies for SUI from lifestyle/behavioral modification to surgical interventions, and these therapies differ in terms of both effectiveness and risk. However, current treatment options raised some concerns regarding safety and efficacy and there was a quest for new treatment options. Several years ago vaginal laser therapy was offered as a minimally invasive treatment option for SUI.

The purpose of this study was to evaluate long term efficacy and safety of non-ablative erbium YAG laser treatment for female stress urinary incontinence (SUI).

Study design, materials and methods

In this single center prospective study in the period from April 2014 to January 2016 we performed ErYAG laser thermo-therapy on a number of female patients having SUI. International Consultation on Incontinence Questionnaire-Urinary Incontinence-Short Form (ICIQ-UI-SF) as well as Incontinence Severity Index (ISI) defined according to Klovning proposal were used for assessment of SUI. Patients received two laser sessions with 4-6 weeks interval. Patients' satisfaction was measured with 11 point numerical scale. Follow-ups were performed at 1, 3, 12 and 18 months. Long term follow-ups were performed via telephone interviews during which aside of ICIQ-UI-SF an additional patients' satisfaction questionnaire was used to assess the duration of SUI improvement and patients' readiness to repeat the treatment. Adverse events were observed and registered at every follow-up.

Results

132 patients with SUI were included in this study. Average age was 50.3 yrs (range 23-75) and parity 1.9 (range 0-4). Average score on ICIQ-UI before the treatment was 11.8 and at the 3 months FU 3.7, (improvement of 8.1 point), Fig. 1. At 3 months FU 39.2% of patients were dry and 96.9% of patients improved their ICIQ score. All reported adverse effects were mild and transient. 75% of patients have the full effect lasting at least 12 months and 24% at least 18 months. Average duration of full effect was 13.0 months. 85% of patients were not disappointed when the symptoms started to come back. The return of symptoms was gradual and 87% of patients felt no need to repeat procedure for at least 12 months after treatment and 43% of patients declared that they felt no need to repeat the procedure even at 18 months after the treatment, Fig.2. Patients' satisfaction at 18 months post treatment was very high - 97% of patients were satisfied with treatment. Average satisfaction score at 18 months was 7.9/10; 68% of patients gave grades from 8/10 to 10/10; satisfaction of 41% of patients was graded 10/10. 98% of patients would repeat the therapy, Fig.3.

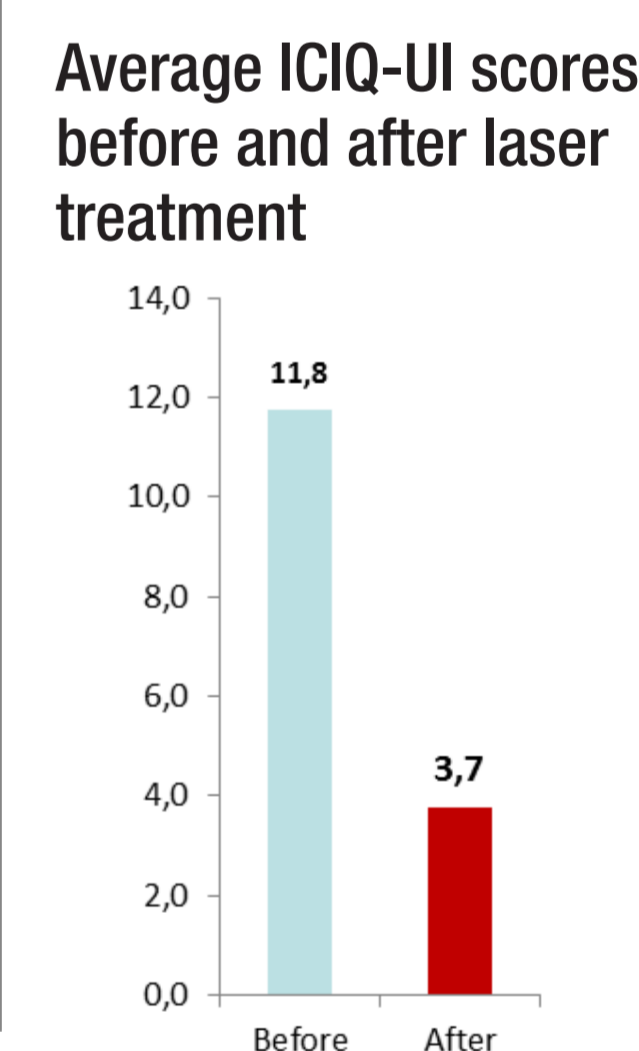
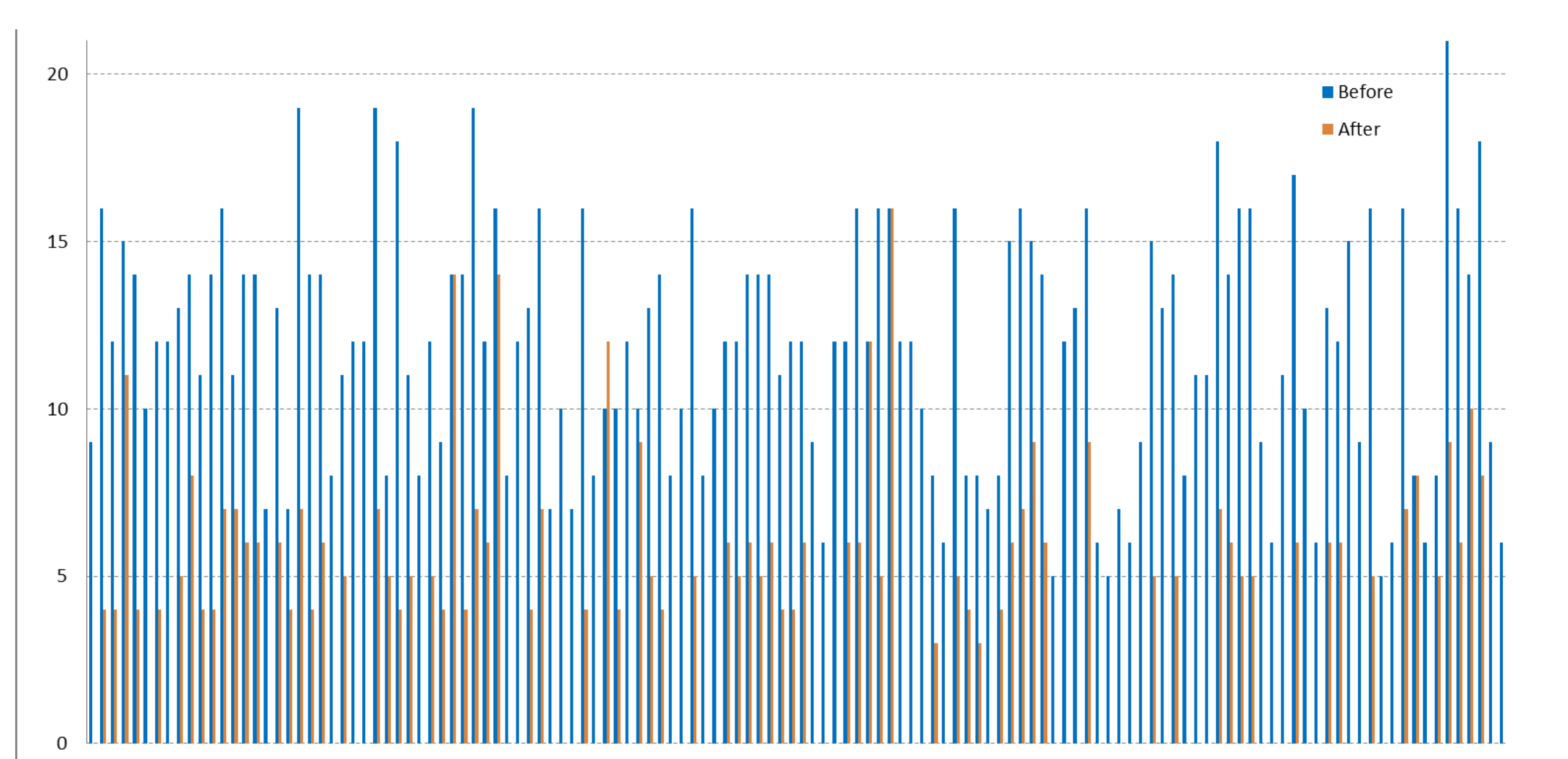
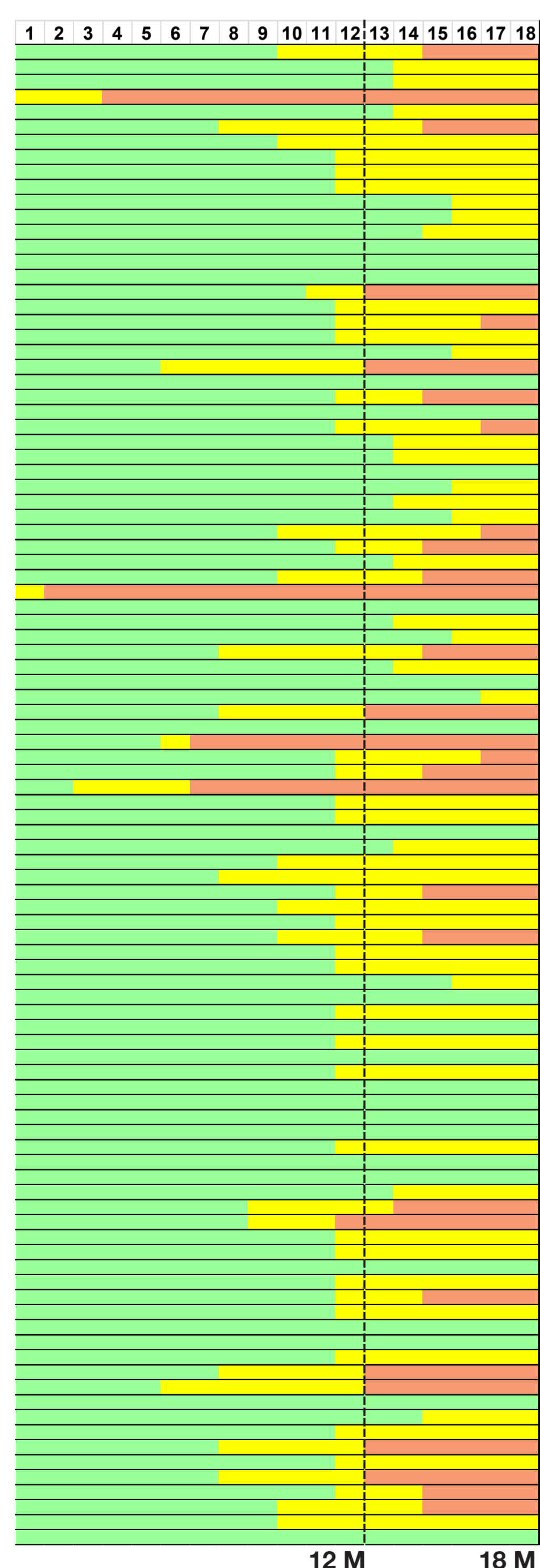


Figure 1.: ICIQ-UI scores before and after laser treatments: 126 (96.9%) of patients improved, 51 (39.2%) become dry

Figure 2.:
Green: lasting of the full effect
Yellow: diminishing of the effect
Orange: return of the symptoms (need for the re-treatment)

75% - full effect for at least 12 months
24% - full effect at least 18 months
Average lasting of the full effect was 13 months
43% of patients at 18 months felt that the re-treatment is still not needed

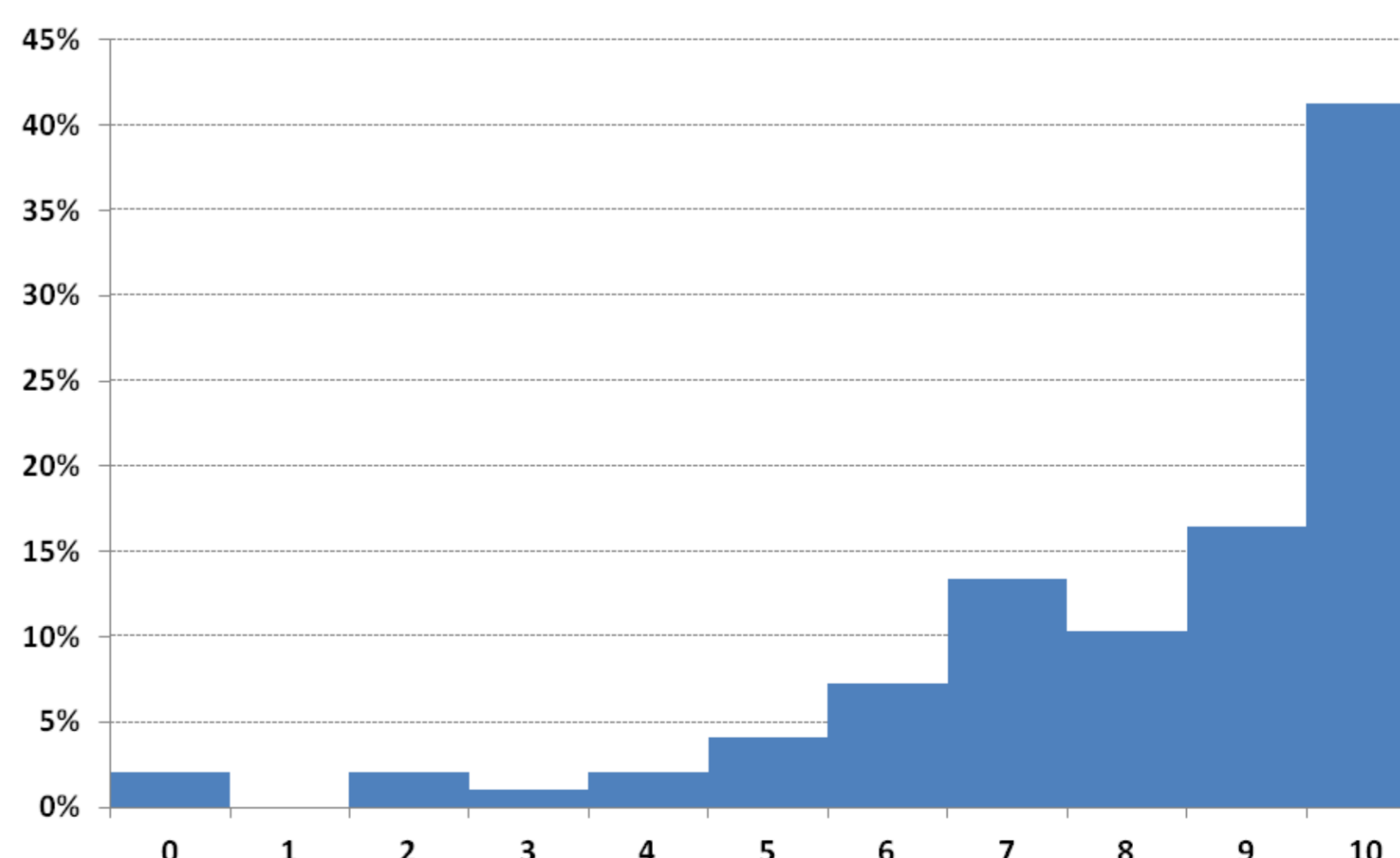


Figure 3.: Satisfaction 18 months after the treatment

Concluding message

Erbium laser treatment showed long term efficacy in improvement of female SUI with no major adverse effects noted. Patients' discomfort during the treatment was minimal and satisfaction very high.

References

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