

Pilot study to monitor improvements during treatment with Top Flat Magnetic Stimulation in patients with urinary incontinence

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MATERIALS AND METHODS

- **Population:** 6 female patients, ($65,33 \pm 20,42$ years) with mixed urinary incontinence MUI (related pathologies: urogenital prolapse, hysterectomy, vesical tenesmus, urge urination).
- **Protocol:** a total of 6 treatments, performed twice a week for 3 consecutive weeks, with Dr. Arnold's Hypotonus / Weakness protocol. The duration of each treatment was 25 minutes. To ensure adequate stimulation, the doctor set the position of the patient's chair before each treatment, and the intensity of the stimulation.
- Three questionnaires were used for the **evaluation** of the improvements: International Consultation on Incontinence Questionnaire Urinary Incontinence Short Form (**ICIQ-UI-SF**), Incontinence Questionnaire Overactive Bladder Module (**ICIQ-OAB**), Incontinence Impact Questionnaire-Short Form (**IIQ-7**). See *Table 1*. The questionnaires were compiled immediately before each treatment, consequently the results refer to the patient's pathological condition at the previous session.

	Score range	Aim
ICIQ-UI-SF	0-21, Divided into the following four severity categories: -Slight (1-5) -Moderate (6-12) -Severe (13-18) -Very severe (19-21).	Evaluation of clinical manifestations of urinary incontinence, of severity of urinary loss and impact on quality of life
ICIQ-OAB	0-16	For overactive bladder, evaluation of urgency, frequency, nocturia, urgency leakage
IIQ-7	0-21	Evaluation of impact of urinary incontinence on activities, relationships, and emotional states

Table 1 Evaluation questionnaires.

RESULTS

The results of the questionnaires were calculated and statistically evaluated. In general, a high score indicates an important presence of symptoms and a great impact of incontinence on daily life, so the decrease indicates an improvement. The means of the scores of the 3 questionnaires were calculated at each session (*Figure 1,2,3*).

The results show a decrease in scores at each session:

- **ICIQ-UI-SF:** the average score at baseline is **20.33 (± 1.15)** and it declines to **3.00 (± 2.64)** after six sessions. At the baseline evaluation, patients most frequently reported they had been experiencing leakage several times a day. After 6 sessions, the leakage occurred only about once a week or less.
There is also a variation in the level of severity of the disease, which varies from **very severe** (at baseline) to **slight** after 6 sessions;
- **ICIQ-OAB:** the average score varies from **10.33 (± 3.05)** at baseline, to **1.66 (± 1.15)** after 6 sessions; there is a significant improvement in the nocturia disorder and a better management of urinary frequency and urgency;
- **IIQ-7:** the average score at baseline is **21.00 ($\pm 0,00$)** and it declines to **0.66 (± 2.64)** after 6 sessions. According to the answers, at the baseline, the health condition and relationships of patients are affected, social and emotional limitations are present. Improvement in quality of life is observed according to the results of the questionnaire, after 6 sessions.

Table 2 shows the results of the mean obtained before and after the 6 sessions, with the standard deviations and percentage variations.

	BASELINE Mean \pm SD	Before the 7th treatment Mean \pm SD	Percentage change
ICIQ-UI-SF	20,33 \pm 1,15	3,00 \pm 2,64	85%
ICIQ-OAB	10,33 \pm 3,05	1,66 \pm 1,15	84%
IIQ-7	21,00 \pm 0,00	0,66 \pm 0,57	97%

Table 2 Mean score related to ICIQ-UI-SF, ICIQ-OAB, IIQ-7

CONCLUSION

The results suggest that, during treatment with Top Flat Magnetic Stimulation, there is a reduction in the symptoms of mixed urinary incontinence and therefore an improvement in the quality of life for the 6 patients with incontinence.

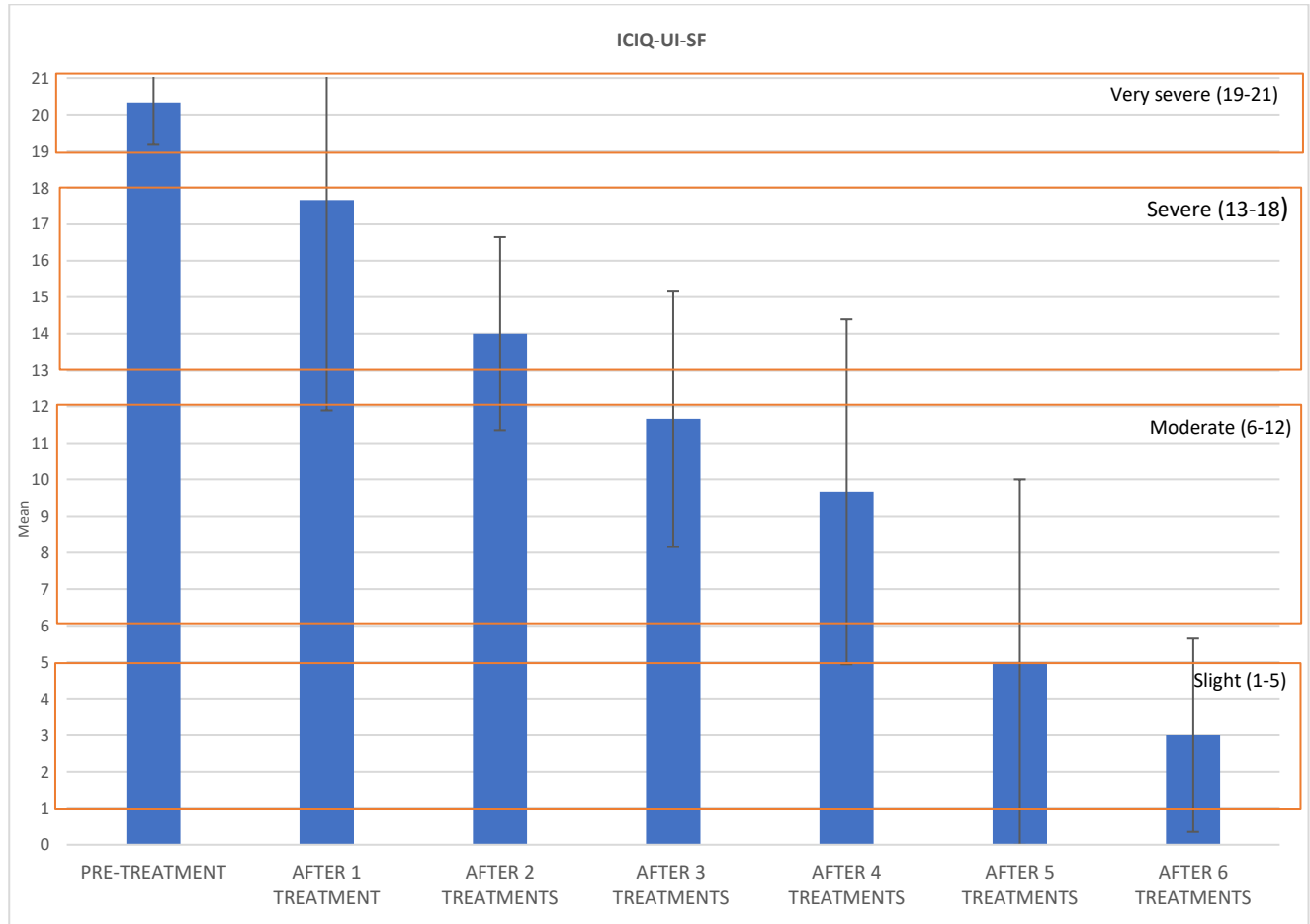


Figure 1 Histogram representation of the mean score of ICIQ-UI-SF.

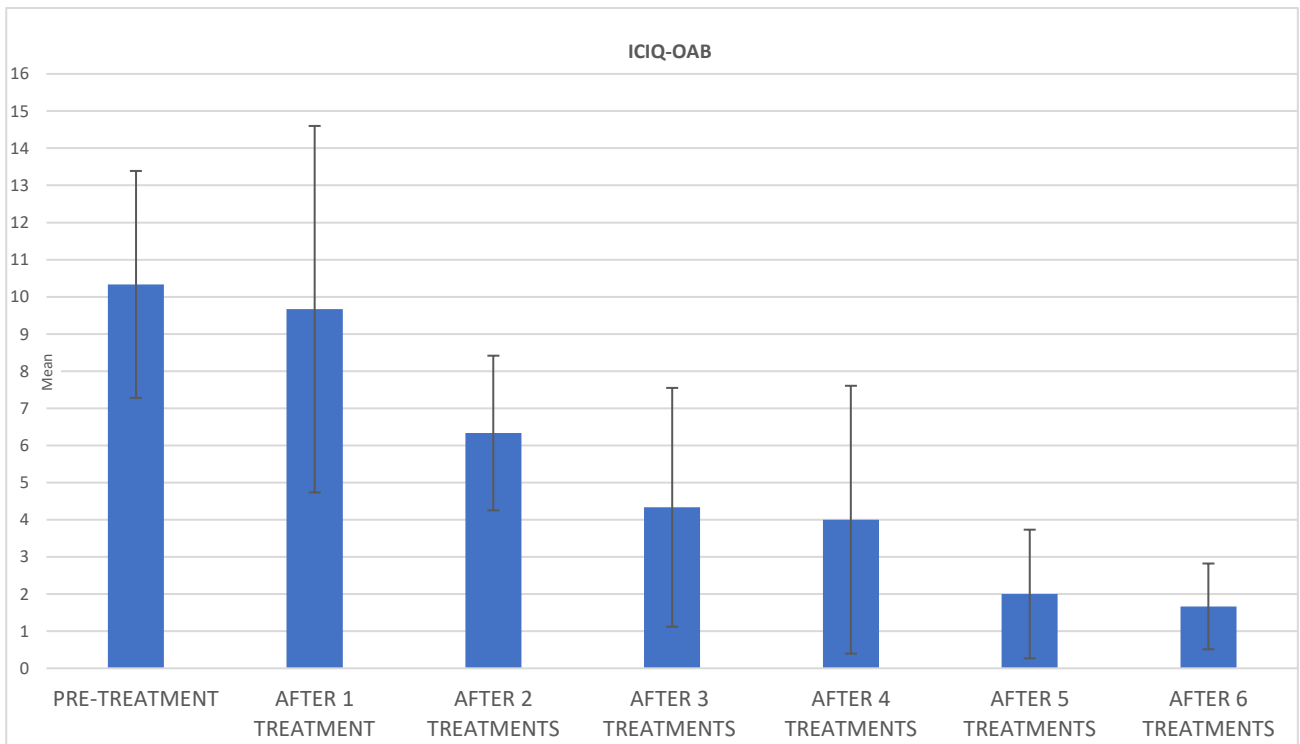


Figure 2 Histogram representation of the mean score of ICIQ-OAB.

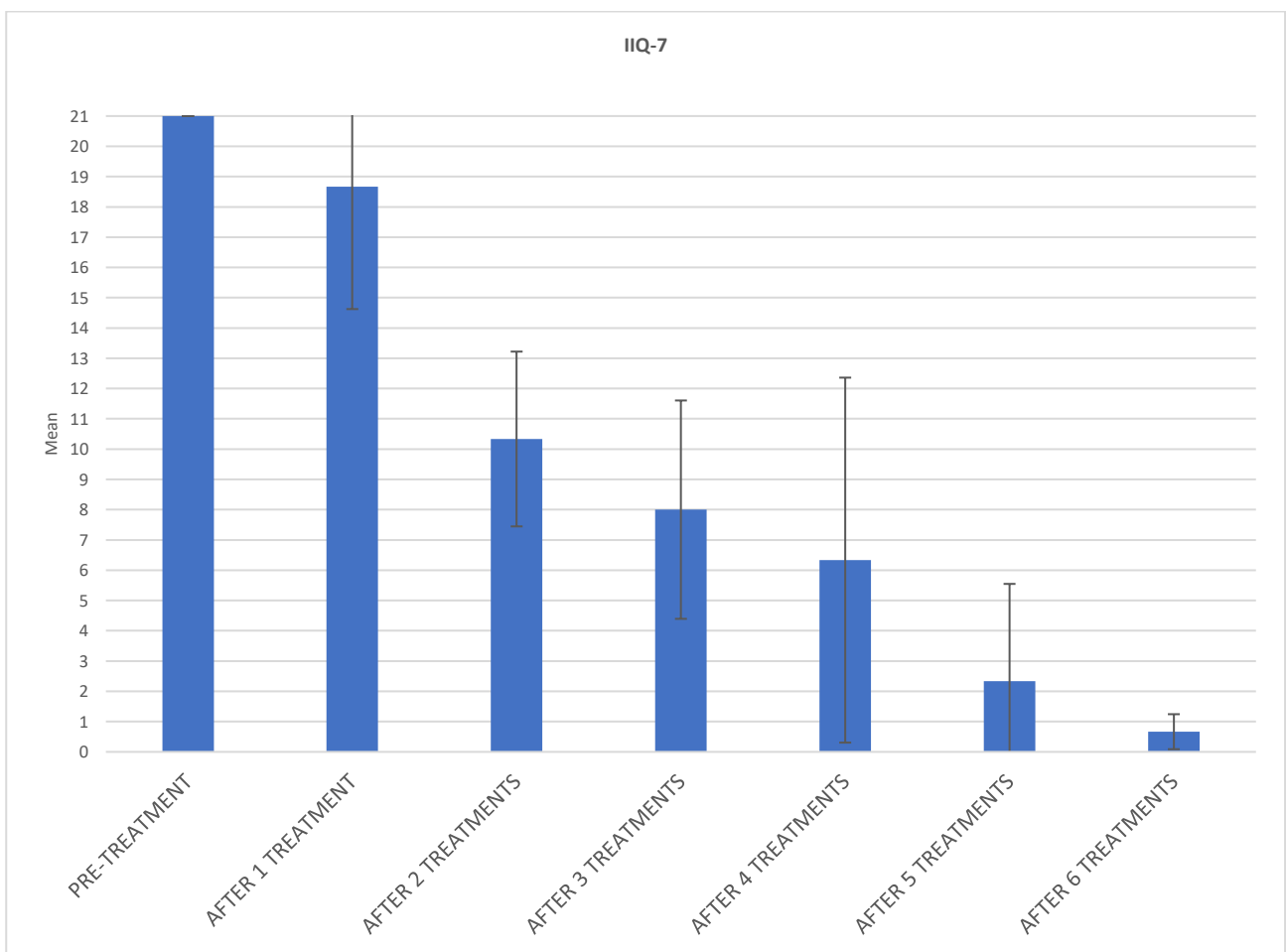


Figure 3 Histogram representation of the mean score of IIQ-7.