

## TREATMENT OF STRESS URINARY INCONTINENCE AND IDIOPATHIC OVERACTIVE BLADDER BY FUNCTIONAL MAGNETIC STIMULATION : SIX MONTHS FOLLOW-UP

### Aims of Study

We aimed to employ objective outcome measures to determining whether the functional magnetic stimulation (FMS) is efficacious in reducing stress urinary incontinence and improving the symptom of idiopathic overactive bladder (OAB) and improvement is persistent after 6 month.

### Methods

We studied 46 women with symptom of incontinence (SUI group) and 42 women with symptom of OAB (OAB group). Treatments were performed for 20 minutes (10Hz for 10 minutes and 50 Hz for 10 minutes), twice a week for 6 weeks and included 12 FMS sessions. Evaluation before treatment included history, physical examination, voiding diary, perineometer, urodynamic study, AUA symptom score and quality of life questionnaires. After treatment, all of the measures were repeated at 1 and 6 months.

### Results

Complete dryness, improved above 50% and persistent incontinence were 26.1%, 41.3%, 32.6% at 1 month in SUI group. However persistent incontinence, 47.8%, at 6 month was significantly increased ( $p < 0.05$ ) and 26 patient (56.5%) with incontinence wanted to operate after FMS treatment at 6 month. OAB symptom revealed a trend improvement at 1 month and didn't change at 6 month (Table 1). There were statistically significant improvement of frequency, urgency and total score of AUA symptom score between pre-treatment and at 1 and 6 month. However, score of nocturia did not change after treatment (Table 2).

Table 1 Results of SUI and OAB group

Group	Result	1 mo (%)	6 mo(%)
SUI group (n=46)	Dry	12(26.1)	9(19.6)*
	Improved	19(41.3)	15(32.6)*
	No improved	15(32.6)	22(47.8)*
OAB group (n=42)	Improved	31(73.8)	29(69.0)
	No improved	11(26.2)	13(31.0)

\*comparison at 1 and 6 month ( $p < 0.05$ )

Table 2. Change of AUA symptom scores after FMS

	pretreatment	1 month	6 month
Total score	15.8±8.4	9.2±6.2*	9.6± 7.0*
Frequency	2.3±1.9	1.0± 0.7*	1.2±1.1*
Urgency	2.1±1.8	1.2±1.1*	1.3±1.0*
Nocturia	2.5±1.7	2.6±1.9	2.8±1.4

\*  $P < 0.05$

### **Conclusions**

FMS treatment resulted in 67.4% of patient becoming dry and improved. After six months without treatment, persistent incontinence was significantly increased. These results suggest that maintenance, adjuvant therapies (combined with biofeedback) or complementary strategies (behavioural therapy and patient education) should be included in clinical practice. The symptom of idiopathic overactive bladder except nocturia demonstrated significant improvement and persistency. However, a longer follow-up is required to determine how long the benefits of treatment will last and whether re-treatment will be necessary and the promising results shown in the current study indicate a definite need and ethical justification for the conduct of a sham controlled trial, which is now commencing.