835

Lo T[1], Ko P[1], Tseng L[1], Lin Y[1], Liang C[1], Wang A C[1]
1. *Chang Gung Menorial Hospital, Lin-Kou medical center, Obs/Gyn, Taiwan*

Efficacy of Extracorporeal Magnetic Stimulation for Women with SUI and OAB in Symptoms Bothersome and Symptoms Cure assessment

Hypothesis / aims of study
Extracorporeal magnetic stimulation (EMS) is a new technique for non-invasive means of treating stress urinary incontinence (SUI) and overactive bladder (OAB). Appropriated evaluation on lower urinary tract symptoms after treatment has not been done.
Aim of our study was to determine the efficacy, safety and compliance of EMS for the treatment of symptoms bothersome in SUI and OAB patients.

Study design, materials and methods
93 patients with SUI or OAB underwent a nine-week course of EMS at 20 minutes twice weekly. The pre- and post-treatment evaluation included 3-day bladder diary, 1-hour pad test, cough stress test, UDI-6 and IIQ-7. Inclusive criteria for USI were patients with urodynamic stress incontinence and a demonstrable urinary leakage during the cough stress test before treatment. The inclusive criteria for OAB were patients who had urinary urgency and a minimum voiding frequency of ten voids a day recorded in bladder diary with the duration of 1 month or longer. Exclusion criteria were patients with symptomatic pelvic organ prolapse with prolapse > stage I by POP-Q (Pelvic Organ Prolapse Quantification), pelvic surgery within 6 months, cardiac pacemakers, neurological diseases, pregnancy, atrophic vaginitis, active vaginal lesions or infections, genitourinary tumors, urinary tract infections, and pelvic irradiation. Patient with concurrent medical treatment, PFMT and PFEs for OAB and SUI detected during study period were also excluded.
Measurements: Successful symptoms bothersome outcomes use UDI-6 question 2 for OAB and question 3 for SUI with score ≤ 2. Cure of SUI and OAB was defined as no urinary leakage during the cough stress test and no symptoms of urgency and urge incontinence.

Results
Seventy-two (77%) patients completed EMS treatment. Geographic and cost of intervention factors were two main explanations for discontinuality. 86.8% (33 of 38) SUI subjects and 94.1% (32 of 34) OAB subjects responded with successful symptoms bothersome outcome on SUI and OAB symptom bothersome. The cure rate for SUI and OAB was 42.1% and 61.7% respectively. There was a significant improvement in both UDI-6 and IIQ-7 total score in both groups after EMS.

Interpretation of results
In terms of bothersome from OAB symptoms as accessed by UDI-6 questionnaire in the present study, the impact a patient's psycho-social health from symptoms of frequent, urgency and urine leakage was significantly improved after EMS. Base on these finding and evidenced by improvement of UDI-6 and IIQ-7 assessment index, patients with overactive bladder is benefit from EMS treatment.
On other hand, patients with SUI might not regard as benefit from EMS as the cure rate was 42.1% only. However, when we analysis of UDI-6 individual item scores showed that patients with urinary symptoms of urine leakage and leakage related to physical activity, coughing, or sneezing and urine leakage can achieve statistically significant reductions with EMS. The successful outcome after EMS treatment on SUI patients and evaluated with symptom bothersome assessment was 86.8%. Furthermore, similar results were confirmed on QoL assessment where the UDI-6 total score and IIQ-7 total assessment index was improved. All the results obtained revealed that EMS has a high good response on the SUI symptoms bothersome reduction. Therefore, the EMS may not be a good treatment of choice aiming for cure of SUI, yet it is certain that it does improve the QoL and reduce the SUI symptom bothersome effectively.

Concluding message
EMS was effective in reducing urinary symptoms bothersome and improving QoL in patients with SUI and OAB. Geographic and cost of intervention factors were factors causing treatment discontinuation. Further studies are needed to evaluate the long-term efficacy.

Specify source of funding or grant	**None**
Is this a clinical trial?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
Specify Name of Ethics Committee	**Ethics approval was obtained through the Institutional Review Board of Chang Gung.**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**