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Effect of surface electromyography biofeedback for quality of life in woman with stress urinary incontinence.

Magdalena Ptak

Poland

Background

Stress urinary incontinence (SUI) affects nearly 60% of women at various stages of their lives. During perimenopause, due to the ongoing hormonal changes, many women experience urine leakage in various situations. Their quality of life (QOL) is lowered due to these incidents. Grade I SUI can be managed conservatively with surface electromyography- biofeedback (sEMG BF). The use of visualization during contraction of the pelvic floor muscles (PFMs) is proposed as a first-line treatment.

Aim

The aim of the study was to evaluate the effectiveness of sEMG BF rehabilitation on the QOL of women with SUI.

Material

81 women aged 45 to 60, declaring SUI of the first degree, were recruited for the study. The average age was 51 years. The average BMI was 26 kg/m². Participants were randomly divided into 2 groups: A (n=40) and B (n=41).

Methods

Women from group A performed PFMs exercises using the sEMG BF (Stella Bio) device, women from group B performed the same exercises without visualization. Both groups exercised for 8 weeks, performing exercises every other day. QOL was assessed using the International Consultation on Incontinence Short Form (ICIQ-UI SF) and Incontinence Impact Questionnaire-7 (IIQ-7).

Results

In both study groups, in the assessment of the ICIQ-UI SF and IIQ7 questionnaires before and after rehabilitation, a statistically significant decrease in the scores in the questionnaires was observed ($p < 0.001$). Patients who used sEMG BF after rehabilitation obtained significantly lower ICIQ-UI SF ($p = 0.022$) and IIC7Q ($p < 0.001$) scores than patients who exercised without using the BF method.

Conclusions

The sEMG BF method is effective in the treatment of first degree SUI. SEMG BF significantly increases the effectiveness of rehabilitation in patients with SUI compared to classic PFMs exercises.

Biography

Magdalena Ptak – PhD, Assistant Professor at the Department of Medical Rehabilitation and Clinical Physiotherapy of the Pomeranian Medical University in Szczecin. She graduated from the Academy of Physical Education in Krakow (2001). She specializes in pelvic floor physiotherapy in such dysfunctions of women and men as urinary/ fecal incontinence, organ prolapse, chronic pelvic pain. She is a member of the International Continence Society and the International Urogynecological Association. She completed many specialized international courses in the field of urogynecological physiotherapy in Spain, France and Germany. Author of international publications speeches on physiotherapy. The owner and employee of the birthing school and private practice. Physiotherapist at the Clinical Hospital in Szczecin.

magdalena.ptak@pum.edu.pl