

TELEMEDICINE FOR TREATMENT AND PREVENTIVE STRESS URINARY INCONTINENCE

Hypothesis / aims of study

The aim of the study was to describe the remote system to pelvic floor muscles (PFM) training and a preliminary assessment of its effectiveness among the two groups of women: one with symptoms of stress urinary incontinence (medicinal training) and second without symptoms but qualified to the high risk group (preventive training).

Study design, materials and methods

A total of 20 participants admitted to the medical project. The patients were recruited in the nonrandomized system between 2013 and 2016. Women were allocated to either a pelvic floor muscle training program. All subjects underwent training with wireless vaginal probe made of soft medical grade silicone. Data was transferred by the Bluetooth connection between the device and smartphone (IOS and Android versions are available).

10 of patients as intervention group had remote control by physiotherapists who supervised the training course: sent reminders training, sent descriptions of the progress (specialists feedback) and results analysis which effected their motivation.

10 of patients as control group had remote training with intravaginal devise but without remote specialists control. Throughout the training period, intravaginal device had been delivering parameters score like: strength, endurance, accuracy of pelvic floor muscles working.

Incontinence Impact Questionnaire (IIQ-7), Urinary Distress Inventory (UDI-6) and King's Health Questionnaire (KHQ) was administered to estimate the symptoms and severity of UI in intervention group. The following tools was used prior to wireless vaginal probe training and 6 months after the training.

Results

The medical project was completed by 20 women. The participants aged 43,6 years. There was highly significant ($p < 0,001$) differences in duration of PFM remote training between intervention group ($140,7 \pm 67$ min) and control group ($69,58 \pm 25,2$ min). The majority of the intervention group was overweight which affected the condition of the reproductive organs. 71,42% of women who had given birth children, were given oxytocin during their childbirth.

The results for PFM strength, there was significant improvement ($p = 0,026$) in group with remote physiotherapist control compared with group without physiotherapist control after therapy. The outcome endurance was higher in physiotherapist control during PFM training with devise after entire therapy compared with group without physiotherapist control ($p = 0,017$). There was not changes in strength ($p = 0,036$; $p = 0,489$) and endurance ($p = 0,049$; $p = 0,037$) in intra-groups analysis. Accuracy of PFM exercise not change in both groups: intervention group ($p = 0,072$) and control group ($p = 0,641$) after training with wireless vaginal probe but there was significant in accuracy over time between the intervention and control group ($p = 0,048$).

There were highly significant ($p < 0,001$) differences in role limitations, personal relationships, emotions and sleep/energy (KHQ elements) in intervention group before and after therapy. UDI-6 total score ($p < 0,001$) and IIQ-7 ($p = 0,004$) improved in follow-up visits during all therapy in group with physiotherapist control.

Interpretation of results

Patients with UI reported improvement in UDI-6 and IIQ-7 scores after training with wireless vaginal probe with physiotherapist control. The use of after training with wireless vaginal probe improves endurance and strength but it does not really affect on accuracy of PFM. The presence of physiotherapist control affects endurance, strength and accuracy of PFM.

Concluding message

The remote PFM exercises supervised by physiotherapist gives higher motivation, control of parameters and perseverance in exercises. The supervision has an impact on the effectiveness of the remote PFM exercises. Training with wireless vaginal probe improves endurance, strength and accuracy of PFM and reduces the incidence of urinary incontinence.

Disclosures

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