

PELVIC FLOOR RE-EDUCATION WITH ELECTRICAL STIMULATION: HOW MANY WOMEN LEARN HOW TO CONTRACT?

Aims of Study

Many women with stress urinary incontinence are unable to voluntarily contract their levator ani muscle. Electrical stimulation is often used to "teach" women how to contract in pelvic-floor-re-education therapy. Some authors doubt that vaginal electrical stimulation leads to an efficient pelvic muscle contraction at all (1). It was the aim of our study to evaluate how many women have learned to contract after a 3-6 months course of electrical stimulation therapy.

Methods

Thirty-nine female subjects with stress, urge oder mixed urinary incontinence or anal incontinence were included. All women underwent a urogynaecological examination (gynaecological examination, stress-test, padtest, multichannel urodynamics, voiding diary). All of these women were not able to contract pelvic floor muscles or had a reduced strength of active muscle contraction (Oxford scale: 0-2). The maximum contraction was detected by digital vaginal palpation before, during and after treatment with electrostimulation therapy. Each subject was treated two times per day by a 10 minute pelvic-floor exercise within a period of three to six months (mean treatment period: 4.4 months). They were also interviewed about incontinence symptoms.

Thirteen patients (group I) changed to active biofeedback training after electrostimulation therapy.

Data were analyzed using one way ANOVA, Wilcoxon signed rank test and Mann-Whitney rank sum test (SigmaStat).

Results

Thirteen women (33.3%) (group I) had learned to voluntarily contract the levator ani muscles after a mean treatment period of 3.7 months and changed to biofeedback-training. Only one of these women did not improve and dropped out of the study. These women showed a significant increase ($p < .0001$) of muscle contraction strength (.69 points to 2.77, Oxford score).

Twenty-six subjects were treated with electrostimulation therapy (group II) only (mean treatment period 4.3 months). In 9/26 (34.6%) pelvic floor muscle strength increased but they did not want to change to biofeedback training, because they were happy with the improvement of incontinence symptoms. Four subjects dropped out (15.3%). The remaining 13 women were unchanged.

In this group II the increase of pelvic floor muscle strength was also significant ($P < 0.0001$) from 0.83 points to 1.68 points (Oxford score).

Before training no difference in pelvic floor muscle strength was found between groups ($P = 0.63$). After therapy, pelvic floor muscle strength was significantly greater group I ($P = 0.0016$).

In conclusion 61% (22/39) women (13 from group I, 9 from group II) learned to contract the levator ani muscles by electrical stimulation.

Conclusions

About sixty percent of women, who could not contract pelvic floor muscles before training, are able to do so after pelvic floor re-education with electrical stimulation.

References

(1) Bo K, Maanum M. Does vaginal electrical stimulation cause pelvic floor muscle contraction? A pilot study. Scand J Urol Nephrol Suppl 1996;179:39-45