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ABDOMINAL AND PELVIC MUSCLE TRAINING UNDER BIOFEEDBACK CONTROL IN THE TREATMENT OF URINARY INCONTINENCE FOLLOWING RADICAL PROSTATECTOMY

Hypothesis / aims of study

Involuntary loss of urine is one of the most common complications of radical prostatectomy, a surgical approach to treating localized prostate cancer. Conservative management of urinary incontinence after radical prostatectomy involves training of pelvic floor muscles while biofeedback helps monitor muscle activity and strength and contributes to the enhanced efficacy of exercises.

Study design, materials and methods

The foregoing method was used in the treatment of 55 patients with a past history of prostatectomy. The median age at diagnosis was 65 (56-74) years. Clinical examination included a review of patient medical records, a urinalysis test, a post-void residual urine test and the ICIQ-SF questionnaire survey. Urinary incontinence after prostatectomy persisted for 2 (1-21) months. Patients exercised their pelvic floor muscles under biofeedback control with a dual channel EMG. The first channel monitored the electrical activity of the pelvic floor muscles. The second channel measured abdominal muscle activity. Patients performed contractions of pelvic muscles with minimal involvement of abdominal muscles during contraction. 25 patients (45.5%) have developed the skill of isolated contractions of the perineal muscles in the course of 1 or 2 training sessions. These patients could exercise on their own. They had their abdominal and pelvic floor muscle checked once a month. The remaining 30 patients (54.5%) could not isolate and contract the muscles of the perineum. They performed exercises coupled with electromyographic biofeedback once a week. The primary efficacy endpoint of treatment was the use of one small urinary pad per day.

Results

In patients with sustainable skill of pelvic muscle contractions the median time to recover urinary continence was 4 months. In the absence of skill to perform isolated pelvic floor contractions median time to continence recovery was 8 months ($p=0.004$)

Interpretation of results

The ability to control pelvic floor muscles offers the possibility of recovery of urinary function and continence following radical prostatectomy. The skill of isolated pelvic floor muscle contraction may serve as a predictor of training efficacy.

Concluding message

Dual-channel EMG biofeedback enables patients to develop the knack of controlling abdominal and pelvic floor muscles, regulating the force of muscle contractions, and enhancing the efficacy of urinary incontinence management after prostatectomy.

Disclosures

Funding: N/A **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** unknown **Helsinki:** Yes **Informed Consent:** Yes