

## THE FUNCTIONAL AVILITY OF PELVIC FLOOR IN MALE PATIENTS AFTER RADICAL PROSTATECTOMY

### Aims of Study

Urinary incontinence after radical prostatectomy is one of the major problems for male urinary dysfunction but it is still not adequately evaluated nor managed. The aim of this study was to assess the avility of male pelvic floor muscle function and the efficacy of physiotherapy for those patients, especially approaching by EMG biofeedback.

### Methods

33 post-prostatectomy patients suffering from 50g or more urinary leakage in 24hours after removal of urethral catheter were assessed in this stury. The mean of the age of those patients was 71 years old. All the patients had instruction for the pelvic floor muscle exercise by rectal palpitation by nurses. We measured the contractility of the pelvic floor muscles by intra rectal EMG probe (by MEGA corporation), the maximum contraction ( $\mu$ V) and endurance (seconds). Patinets were then instructed the pelvic floor exercise by IncoTrainer™ system. After one week of this first session of biofeed back instrucion, in cases whose urinary leakage during 24 hours still persisted over 50g(20 cases), we performed additional 8 week biofeedback sessions by the same system.

### Results

The urinary leakage for 24 hours ranged 50-700g (mean 190g) at the first evaluation. We devided those patients into 2 groups to analysis, BF group; who underwent intensive biofeed back session for 8 weeks, non-BF group; who didn't undergo another session of biofeedback. The 24-hours urinary leakage was 250/90g in BF/non-BF group ( $p < 0.05$ ). The contractility was revealed that the maximum pelvic floor muscle contraction BF group was higher than that of non-BF cases;  $22\mu$ V/ $18\mu$  ( $p = NS$ ) but the endurance of contraction of BF group was shorter than that of non-BF cases; 5.1sec./7.3sec. 11cases of BF group could't isolated pelvic floor muscles and contracted adjacent muscles(rectus muscles, femoral adductor muscles, gluteus muscles) , incorrectly at the early in the period of biofeedback sessions. After 8 sessions of biofeedback, 24-hours urinary leakage improved, 250 to 69g( $p < 0.05$ ). Although the maximum contraction was same level; 22 to  $23\mu$ V, the endurance of pelvic floor muscle contraction improved; 5.1 to 10.3 sec.( $p < 0.05$ ).

### Conclusions

Male patients have no event that might occur damage to pelvic floor muscles like pregnancy nor delivery in their natural physiological life. While, radical prostatectomy, especially retropubic approach, would not have major damage for pelvic floor muscles themselves. Nevertheless, the functional avility of pelvic floor muscle in those patients was not superior. After intensive pelvic floor exercise by EMG biofeedback the contractility of pelvic floor muscles significantly improved. Re-education of pelvic floor by physiotherapy has efficacy not only for the female urinary incontinence but also for the male urinary incontinence.