

EVALUATION OF TREATMENT OUTCOMES IN PELVIC FLOOR MUSCLE TRAINING WITH BIOFEEDBACK VERSUS INTRA-VAGINAL ELECTRICAL STIMULATION IN WOMEN WITH URINARY INCONTINENCE IN HONG KONG PAMELA YOUDE NETHERSOLE EASTERN HOSPITAL

Hypothesis / aims of study

In Hong Kong, the prevalence of Female urinary incontinence is around 35% and around 18% (~60,000 female) suffered from severe incontinence. However, due to the fact that many women have poor coordination of pelvic floor muscle it leads to unsatisfactory treatment outcomes. Few studies have compared the effectiveness of biofeedback pelvic floor muscle training against intra-vaginal electrical stimulation in treating urinary incontinence.

Study design, materials and methods

To evaluate the treatment outcomes and effectiveness of biofeedback pelvic floor muscle training against intra-vaginal electrical stimulation for female patients with urinary incontinence.

Results

All patients who attended the female urinary incontinence clinic from January 2014 to December 2015 were recruited into the study and the outcomes were analysed. All patients follow a standard treatment protocol for the first three months, they were taught how to perform pelvic floor muscle training, life style modification education, etiology of urinary incontinence education and initial assessment of symptom scores (UDI-6, IIQ7), no. of pad used and the time interval between each micturition were documented. For those patients with poor outcomes, patient would choose either using biofeedback pelvic floor training or intra-vaginal stimulation for further three months. Symptom scores were reassessed after therapy.

Interpretation of results

During the study period, 1896 patients were recruited into the study. Their ages were between 41-83 (mean 58.8). The average duration of urinary incontinence (UI) was 4.5 years. Forty percent has mixed urinary incontinence, 48% had stress incontinence and 12% had urge incontinence.

107 patients (5.6%) failed to show any significant improvement despite three months of initial treatment, of which 62 patients (57.9%) were then proceeded to the intra-vaginal electrical stimulation group and 45 patients (42.1%) to the biofeedback pelvic floor muscle-training group. After a further 12 weeks of treatments, the intra-vaginal stimulation group, had decreased UDI-6 of 1.4 (P<0.007) and IIQ7 decreased of 1.2 (P<0.057). The biofeedback pelvic floor muscle training group had decreased UDI-6 of 2.2 (P<0.02) and IIQ7 of 2.3 (P<0.05). The no. of pad used per day reduced from 2.4 to 1.2 (P<0.05) in intra-vaginal stimulation group; 2.3 to 2.1 (P< 0.045) for the biofeedback pelvic floor muscle training group. The time interval between each micturition increased from 1.4 hour to 2.8 hours (P< 0.005) for both groups.

Concluding message

The results of this study showed that the intra-vaginal stimulation and biofeedback were both equally effective for poor responding patients. For the biofeedback group, the symptom scores and quality of life scores showed better improvement comparing to the intra-vaginal group. This may be because biofeedback is comparatively more comfortable than intra-vaginal stimulation, not all patients accept intra-vaginal probe insertion and for some patients with atrophic vagina, introduction of probe may be painful. For the actual no. of pad used, the intra-vaginal stimulation group showed a much more significant improvement. This may be accounted by the fact that direct stimulation of pelvic floor muscle is useful for patients with poor active movement. The drawback of this study is that the treatment options were patient driven and not randomized but the advantage of patient driven treatment is that patients are very compliance to time consuming rehabilitation program.

Disclosures

Funding: Nil **Clinical Trial:** Yes **Public Registry:** No **RCT:** No **Subjects:** HUMAN **Ethics not Req'd:** This is our standard treatment to all female urinary incontinence and follow the standard treatment protocol **Helsinki not Req'd:** Nil **Informed Consent:** Yes