

THE LONG-TERM EFFECT OF A SPECIAL PROGRAMME OF PELVIC FLOOR MUSCLE TRAINING FOR FEMALE PATIENTS WITH LUTS IN JAPAN

Hypothesis / aims of study

Measurement at baseline of pelvic floor muscle (PFM) function [1] is essential for appropriate teaching and supervising training for women with pelvic floor dysfunction (PFD) referred for pelvic floor muscle training (PFMT). There are some reports of the measurements in youth, but there are few reports regarding the measurements in elderly patients. Unlike Western countries, there are few medical institutions which perform instruction of PFMT in Japan.

The primary purposes of this study was to compare the change in the PFM function before and 6 months after PFMT in female patients with LUTS, in 2 Japanese Urological out-patient offices.

Study design, materials and methods

Data of women with LUTS referred to a PFMT programme were included in a retrospective chart review.

Seventy-three patients with female LUTS who had visited either of 2 different Japanese Urological out-patient offices between January 2011 and December 2014, were included into this study. Before treatment, the following data were obtained: age, Pad test (g), ICIQ-SF, Modified Oxford Grading scale (0-5), perineometry (cm H₂O), and electromyography (EMG). PFM activity had been recorded using a vaginal probe, and the following parameters were analysed; a 10-seconds' baseline activity, 5 repeated short (quick flick) contractions, 5 repetitions of 10-seconds' maximal voluntary contractions (MVCs), and 10-seconds' relaxation. Those patients were extensively trained for self-PFMT by experienced nurses at the 1st visit in one of above Urological out-patient offices. Then, those patients had carried out self-PFMT at home every day for six months. They had been re-evaluated and re-trained for self-PFMT once a month in Urological out-patient clinic.

The data (age, Pad test, ICIQ-SF, Modified Oxford Grading scale, perineometry, EMG, and parameters of PFM activity) before and 6 months after PFMT were compared.

Statistical analysis was performed using a paired t-test to compare objective and subjective variables before and after PFMT. $p < 0.05$ was considered statistically significant for all tests.

Results

There was significant improvement in muscle strength as measured by the Oxford scale 6 months after PFMT (Fig1).

The strength of the PFM as measured by a perineometer was significantly increased 6 months after PFMT (Fig2). PFM activity (microV) of both short contraction and maximal voluntary contraction (MVCs) revealed significant improvement 6 months after PFMT.

There was significant reduction in pad weight measured by Pad test 6 months after PFMT.

Interpretation of results

According to the International Urogynecological Association (IUGA)/ International Continence Society (ICS) Joint Report, voluntary PFM contraction and relaxation may be assessed by visual inspection, digital palpation, electromyography (EMG), dynamometry, perineometry or ultrasound [2].

Extensive training for self-PFMT by experienced nurses at the 1st visit, and once every month in Urological out-patient offices may be effective for correct self-PFMT performance at home, and can improve muscle strength as measured by the Oxford scale and the strength of the PFM as measured by a perineometer 6 months after introduction of PFMT in Japanese female patients with LUTS.

Concluding message

Seventy-three Japanese female patients with LUTS had been extensively trained for Self-PFMT at home in Urological out-patient office. They had been instructed at the 1st visit, and re-evaluated and re-trained once every month by experienced nurses.

Those special training programme revealed good effects on the degree of urinary incontinence, and the strength of PFM.

Further long-term evaluation and higher volume study are needed.

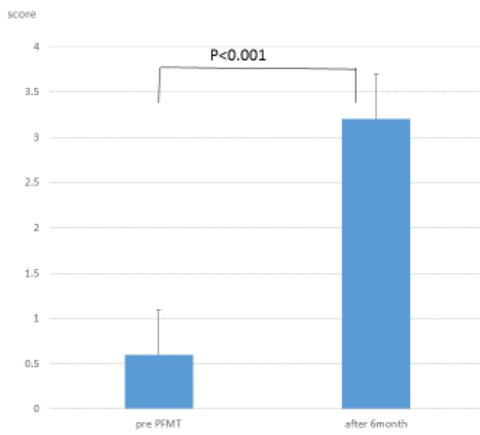


Figure.1 Oxford Scale

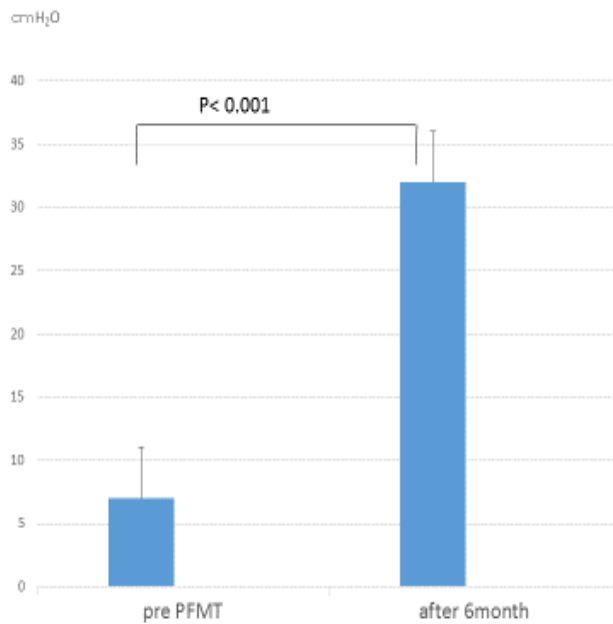


Figure.2 Perineometry

References

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2. Haylen BT, de Ridder D, Freeman RM, Swift SE, Berghmans B, Lee J et al (2010) An International Urogynecological Association(IUGA)/International Continence Society (ICS) joint report on the terminology for female pelvic floor dysfunction. *Neurourol Urodyn*

Disclosures

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Yamanashi university ethics committee **Helsinki:** Yes **Informed Consent:** Yes