

P343. Evaluation of the effectiveness of the motion picture using magnetic resonance images for the pelvic floor muscle training

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Context: Pelvic relaxation results in stress urinary incontinence or pelvic organ prolapse in women. Pelvic floor muscle training (PFMT) is useful for the prevention and improvement of pelvic relaxation. However, since the pelvic floor muscles are inner muscles, it is not easy to correctly perform PFMT. Therefore, we developed a motion picture for the imagination of the movement of PFMT. The motion picture was prepared using sagittal T1-weighted magnetic resonance (MR) images of the pelvis in a sitting posture, “at rest” and “at pelvic floor muscles contraction”.

Objective: The purpose of this study was to evaluate the effectiveness of the motion picture using MR images for PFMT.

Methods: This was a pilot comparative study of 3 groups as follows; “Group A” (no treatment), “Group B” (PFMT by the verbal instruction), and “Group C” (PFMT using the motion picture). Participants of “Group B” and “Group C” were performed PFMT over a 12-week duration.

Participants: The participants included 59 parous women after vaginal delivery (aged 20-40 years). They were randomized into 3 groups. This study conformed to the provisions of the Declaration of Helsinki.

Interventions: The participants of “Group B” were conducted the PFMT at home over a 12-week duration (more than 3 minutes per day), after receiving the guidance of the PFMT by the verbal instruction from a nurse. The participants of “Group C” were conducted the PFMT at home over a 12-week duration using the motion picture that were distributed to their own mobile phone (more than 3 minutes per day), after receiving the guidance of the PFMT using the motion picture from a researcher. The strength of the pelvic floor muscles was measured before and after intervention.

Main outcome measure: The strength of the pelvic floor muscles was measured using an extracorporeal biofeedback device (Pelvic Floor Muscle Trainer; HnJ-500, Furun Medical Co., Korea). A score representing self-control ability of pelvic floor muscles was used to compare the strength of pelvic floor muscles among groups. The Mann-Whitney U test and Bonferroni correction were used to compare differences between each group.

Results: At after intervention, the score representing self-control ability of pelvic floor muscles of the participants in “Group C” were significantly higher than the scores in “Group A” or “Group B” ($p < 0.05$).

Conclusions: The motion picture using MR images might be useful for PFMT.

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