

Effects of transvaginal electrical pelvic floor muscle stimulation in women with stress urinary incontinence

Ji-Hyun Kim, Hye-Seon Jeon, Oh-Yun Kwon, Eun-Young Park, Ui-Jae Hwang, Gyeong-Tae Gwak and Hyeo-Bin Yoon
Yonsei University, South Korea

Stress urinary incontinence (SUI) a common women health problem is an involuntary leakage of urine while sneezing, coughing or physical exertion caused by insufficient strength of the pelvic floor and sphincter muscles. Pelvic floor electrical stimulation (PFES) have been applied to improve the symptoms of the people with SUI. PFES activates afferent fibers of pudendal nerve and induces contractions of the pelvic floor muscles (PFM) such as striated periurethral muscles and striated PFM. The purpose of this study was to determine if the 8-week PFES would be effective to improve the symptoms and satisfaction of the females with SUI. Easy-K, specially designed PFES for the people with SUI, was used in this study. They have used the stimulator once a day for 20 minutes for each session at home. Outcome data was collected at the baseline, 4 weeks and 8 weeks after the intervention. Intravaginal sonography was used to measure the bladder neck angle, bladder neck movement, funneling index, thickness of an anterior rhabdosphincter and a

posterior rhabdosphincter, urethral length, and urethral width. Levator ani muscle (LAM) contraction strength was assessed by manual palpation. In addition, incontinence quality of life (IQOL) and female sexual function index (FSFI) questionnaires were used to obtain subjective information. The bladder neck angle, funneling index and urethral width were significantly decreased after intervention ($p < .05$). LAM contraction score, urethral length and anterior and posterior rhabdosphincter thickness were increased by the intervention ($p < .05$). However, no significant change was found in the bladder neck movement. Although total score of the IQOL did not improve, the score of the 'avoidance' subscale of IQOL had significant improved and FSFI had statistical difference in FSFI total score and 'desire' subscale ($p < .05$). In conclusion, 8-week use of a PFES improved mechanical structures of the PFM as well as IQOL and conjugal relationship.

e: Kimjihyun012@naver.com