

P344. Effectiveness of the moderately supportive underwear in women with stress urinary incontinence, Part 2: Are the symptoms of urinary incontinence reduced due to wearing the underwear? An assessor-blinded randomized control trial

S Ninomiya (JP) [1], N Sugino (JP) [2], S Morikawa (JP) [3], K Naito (JP) [4], Y Endo (JP) [5], Y Saito (JP) [6], H Okayama (JP) [7]

Context: In part 1, the developed moderately supportive underwear was effective to elevate the bladder neck. In a previous single-arm pilot study, the supportive underwear with the effect of elevating the bladder neck reduced the symptoms of urinary incontinence (UI) in women was reported¹⁾.

Objective: The aim of this study was to verify the effectiveness of the developed moderately supportive underwear to reduce UI symptoms.

Method: This study was an assessor-blinded randomized control trial to compare 3 types of underwear over a 14-week duration. The following 3 types of underwear were compared; normal placebo underwear “A”, moderately supportive underwear “B”, and supportive underwear used in the previous study¹⁾ “C”.

Participants? The participants included 90 parous women with stress UI (age, 30–59 years; waist measurement, 60–85 cm; hip measurement, 84–105 cm) that were recruited by a recruitment agency. This study conformed to the provisions of the Declaration of Helsinki.

Interventions? This study was comprised of a 2-week observation period without underwear and a 12-week intervention period wearing the specified underwear. The symptoms of UI in participants were compared between baseline (end of observation period) and end of intervention period by a blinded assessor. The Mann-Whitney U test and Bonferroni correction were used to compare differences between each groups. The Wilcoxon signed-ranks test was used to compare differences between baseline and end of intervention.

Main Outcome Measures? The UI symptoms in participants were measured as follows: incontinence episode/week, 1-h pad test, and the Japanese version of International Consultation of Incontinence Questionnaire Short-Form.

Results? A total of 85 participation (94.4%) completed the study: A: 26 women, B: 30, and C: 29. At the end of intervention, all UI symptoms were significantly reduced from baseline in all groups including the placebo underwear “A” ($p < 0.05$). The UI symptoms disappeared (incontinence episode/week and 1-h pad test showed 0) or reduced (incontinence episode/week and 1-h pad test showed less than 50% decrease from baseline) in 18 women wearing underwear “B” (60%), 17 women wearing underwear “C” (58.6%), but only in 10 women wearing underwear “A” (38.5%).

Conclusions? The developed moderately supportive underwear was more effective to reduce the UI symptoms than the placebo, as well as the supportive underwear used in the previous study¹⁾.

[1] Human Health Science, Graduate School of Medicine, Kyoto University, Kyoto, [2] Human Science Research Center, Wacoal Holdings Corporation, Kyoto, [3] Molecular Neuroscience Research Center, Shiga University of Medical Science, Otsu, [4] Department of Childhood Care, Faculty of Education Welfare, Biwako Gakuin University, Otsu, [5] Department of Nursing, Shiga University of Medical Science, Otsu, [6] Department of Nursing, Aino University, Ibaraki, [7] Faculty of Medicine, University of Tsukuba, Tsukuba