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# NON-FACE-TO-FACE TREATMENT OF STRESS URINARY INCONTINENCE: PREDICTORS OF SUCCESS AFTER 1 YEAR

Hypothesis / aims of study

The prevalence of female stress urinary incontinence (SUI), the leakage of urine when sneezing, coughing, or upon exertion, is 10-35%. First-line treatment for SUI is pelvic floor muscle training (PFMT) and lifestyle changes. Only a few studies have addressed the long-term (≥12 months) results of PFMT, and little is known about possible predictors of a successful outcome. The aim of this study was to determine possible predictors of long-term success in women treated with PFMT for SUI.

Study design, materials and methods

Secondary analysis of data from a randomized controlled trial conducted between 2009 and 2011 (ID: NCT01032265) that compared two non-face-to-face treatment programs for women with clinically relevant SUI (≥1/week), both based mainly on PFMT. Women were enrolled in the project after online screening that included validated questionnaires, a 2-day bladder diary, and a telephone interview with a urotherapist. Non-face-to-face follow-up was performed at 4 months and 1 year using self-assessed questionnaires. The results were comparable regarding short-term and long-term primary outcomes based on symptom score and condition-specific quality of life. In the present study we included all participants who answered the one-year follow-up (n=169, mean age 50.3 (SD 10.1) years), regardless of the intervention group. Three outcome variables were used to define success after one year: 1) Patient Global Impression of Improvement (PGI-I), a subjective validated evaluation of the result from the intervention in which the answers “much better” or “very much better” were used to define success; 2) International Consultation on Incontinence Modular Questionnaire Urinary Incontinence Short form (ICIQ-UI SF), a validated and highly recommended self-assessed questionnaire that evaluates symptoms such as frequency and amount of leakage and overall inconvenience; and 3) sufficient treatment, a single question at the one-year follow-up assessing the patient’s wish for further treatment other than the 3 months of PFMT. We chose to analyze possible predictors based on knowledge from the literature. Baseline data, such as risk factors and predictors from short-term predictor studies, results from the 4-month follow-up, and how often PFMT was performed at the one-year follow-up were evaluated as potential predictors of success using logistic regression. Predictors with a p-value <0.25 in the univariate logistic regression were carried over to the multivariate logistic regression model. Each outcome variable was analyzed separately.

Results

Seventy-seven percent (129/169) of participants were successful in at least one of the outcome variables, and 23% (37/160) were successful in all three. The outcome variables corresponded to the following success rates: PGI-I, 33% (55/168); ICIQ-UI SF, 57% (95/166); and sufficient treatment, 57% (93/162). No single predictor was significant for a successful result in all three outcome variables at the 1-year follow-up. However, for each of the outcome variables, a successful result at 4 months was predictive of a successful result at 1 year. The adjusted odds ratios (ORs) for success at 1 year were 5.15 (95% confidence interval (CI) 2.40-11.03) for PGI-I, 6.85 (95% CI 2.83-16.58) for ICIQ-UI SF, and 3.78 (95% CI 1.58-9.08) for sufficient treatment among women who were successful in the corresponding outcome variable at 4 months compared to those who were not. The adjusted ORs for the predicted success of older age was 1.06 (95% CI 1.02-1.10) for PGI-I and 1.08 (95% CI 1.03-1.13) for sufficient treatment. The predicted success of performing regular PFMT at 1-year follow-up compared to not training regularly had adjusted ORs of 2.32 (95% CI 1.04-5.20) for PGI-I and 2.99 (95% CI 1.23-7.27) for sufficient treatment.

Interpretation of results

Our finding that a successful result at 4 months of follow-up is a predictor of long-term success is comparable to the results in a review of long-term results in which 7/19 studies reported the long-term outcome based on short-term success and found that the responders to the initial program maintained the result better than non-responders [1]. Most short-term predictor studies do not report adherence to the treatment. Hung *et al.* found that increasing strength, but not adherence to PFMT, is a factor for successful results, but our results show that adherence can predict success [2]. We also found increasing age to be a predictor of successful results. Older age may be a factor that makes women more likely to respond that they are much or very much improved by the treatment and less prone to want further treatment, such as surgery. Also, older women may have more time to do PFMT. SUI is a fluctuating condition with the highest prevalence among women who are 45-49 years old [3]. Why incidence decreases and remission increases after that age is not known.

Concluding message

This study suggests the presence of predictors that foresee long-term success in women with clinically relevant SUI treated with PFMT without face-to-face contact. A successful result at the 4-month follow-up, performance of regular PFMT after 1 year, and older age were significant predictors of success. These results can be helpful when informing patients with SUI about PFMT in a clinical setting.

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Disclosures
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