

PROGNOSTIC INDICATORS OF POOR SHORT-TERM OUTCOME OF PHYSIOTHERAPY INTERVENTION IN WOMEN WITH STRESS URINARY INCONTINENCE

Hypothesis / aims of study

Little research has been done to see whether risk factors for stress urinary incontinence (stress UI) also have prognostic value. The aim of the study is to identify prognostic indicators of poor outcome of physiotherapy intervention in women with primary or recurrent stress urinary incontinence (stress UI).

Study design, materials and methods

A prospective cohort study was performed in physiotherapy practices in primary care to identify prognostic indicators of poor outcome 12 weeks after initiation of physiotherapy intervention. Patients to be included in the cohort were restricted to women over 18 years of age with a diagnosis of stress UI that was urodynamically proven or based on history and physical examination, and a minimum duration of at least 6 months, to exclude women with a favourable natural course. Sixteen potential risk factors for stress UI were identified and examined as prognostic indicators of poor outcome. The primary outcomes were defined as poor outcome on the binary Leakage Severity scale (LS scale) and on the binary Global Perceived Effectiveness (GPE) score. For the multivariable logistic regression analyses we followed Steyerberg's rules for relatively small data sets. The models were constructed for each of the two binary outcomes, using all specified prognostic indicators, and forced into a full multivariable logistic regression model. Indicators with a p -value ≥ 0.50 were then omitted one by one from the model using the indicator with the highest p -value first (non-automated backward selection). This procedure was repeated until all indicators with a p -value < 0.50 were retained in the final model. The results are presented as odds ratios (ORs) with corresponding 95% confidence intervals [95% CI].

Results

267 women, with a mean age of 47.7 (SD = 8.3), with stress UI for at least 6 months were included. At 12 weeks, 43% and 59% of the women were considered recovered on the binary LS scale and the binary GPE score, respectively. Prognostic indicators associated with poor outcome included 11 indicators based on the binary LS scale with ORs [95% CI] ranging from 0.04 [95% CI: 0.01-0.15] for mixed but dominant stress UI to 0.41 [95% CI: 0.17-0.98] for menopausal status. Prognostic indicators associated with poor outcome based on the binary GPE score included 8 indicators with ORs [and 95% CI] in a range of 0.10 [95% CI: 0.02-0.53] for POP stage III to 0.41 [95% CI: 0.17-0.99] for psychological distress.

Interpretation of results

The results of this prospective cohort study demonstrate strong negative associations between reported risk factors and recovery, though the associations vary between outcome measures. The prognostic indicators shared by both models show that poor recovery was associated with women with severe stress UI, POP-Q stage $> II$, poor outcome of physiotherapy intervention for a previous UI episode, prolonged second stage of labour, BMI > 30 , high psychological distress and poor physical health.

The strength of this multi-centre study is the completeness of the data at baseline and at 12 weeks and the blinded outcome measurements. The prognostic indicators and outcome measures we used were simple and easy to collect and did not require extensive training for the therapists.

Concluding message

We can conclude that this study provides robust evidence of clinically meaningful prognostic indicators of poor short-term outcome. These findings need to be confirmed by replication studies. Further research should also evaluate specific treatment strategies based on these prognostic indicators of poor outcome.

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What were the subjects in the study?	HUMAN
Was this study approved by an ethics committee?	Yes
Specify Name of Ethics Committee	The Medical Ethics Committee of the Deventer Hospitals, the Netherlands, approved the study
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	Yes