



#341 The association of defecation problems and pelvic pain with the course of lower urinary tract symptoms in community-dwelling men and women



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Introduction

Lower urinary tract symptoms (LUTS) are common in both men and women, and frequently co-exist with other types of pelvic floor symptoms (PFS), such as defecation problems and pelvic pain (1). In both men and women, longitudinal studies showed the dynamic nature of LUTS over time (2,3).

However, studies do not include the possible association with other PFS on the course of LUTS. Therefore, there is a lack of information about the longitudinal trajectory of different types of PFS and course of LUTS in the general population.

Aim

Our aim was to assess the course of LUTS, and to assess the association of defecation problems and pelvic pain with the course of LUTS in both community-dwelling men and women.

Methods and Materials

Design and participants

- A prospective observational population-based study, including citizens aged ≥ 16 years living in a municipality in the northern part of the Netherlands
- Men and women filled in questionnaires at baseline, after one year follow-up (T1) and two years follow-up (T2)

Questionnaires

- **LUTS:** ICIQ-MLUTS (0-52) and FLUTS (0-48)
- **Defecation problems:**
 - Fecal incontinence (Wexner incontinence score (0-20))
 - Constipation (Wexner constipation score (0-30))
- **Pelvic pain** defined as the presence of pain in the pelvic region

Analyses

- Men and women with available change scores on LUTS, defecation problems and pelvic pain (i.e. period 1: T1 versus baseline, or period 2: T2 versus T1) were included
- Medians (interquartile range (IQR)) were used to display the LUTS scores over time, separate for men and women and for different age groups. Wilcoxon signed rank tests were used to compare median LUTS scores for the different age groups and for men and women separately
- Generalized Estimating Equations (GEE) analyses were used to test:
 - 1) progression of LUTS change score in time
 - 2) the association between change scores in defecation problems and pelvic pain, and LUTS change score. Used covariates: age (years), body mass index (kg/m²) smoking (yes/no), type of delivery in women (no delivery/only caesarean section without vaginal delivery/ ≥ 1 vaginal delivery)

Results

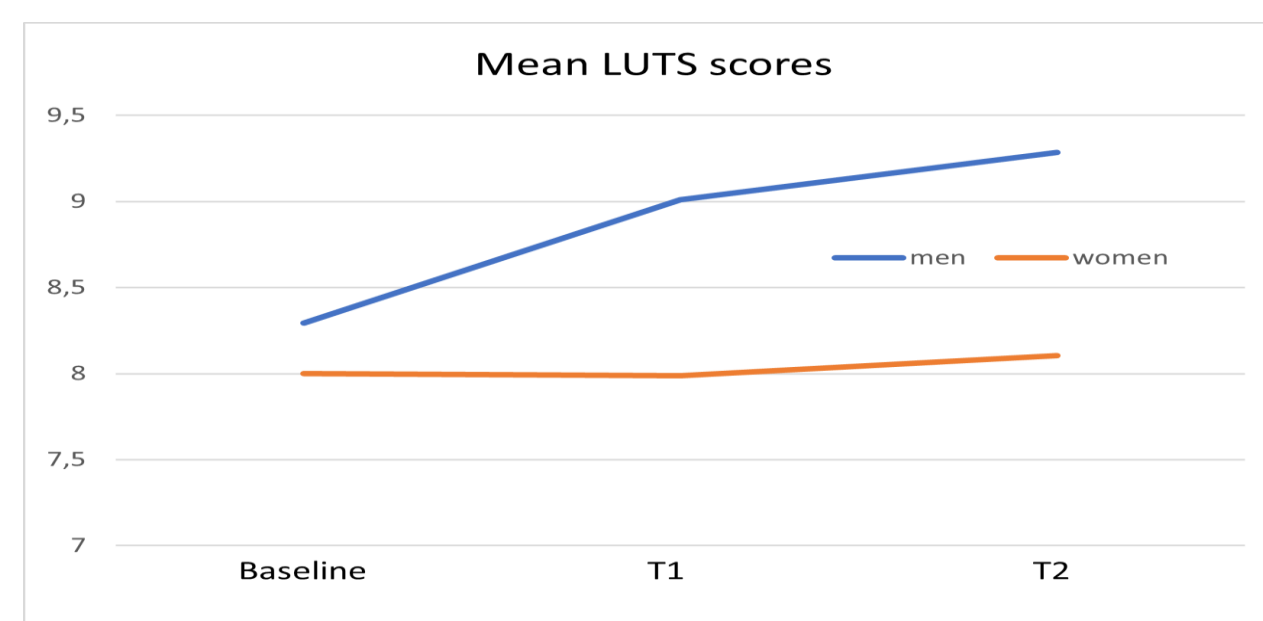


Figure 1. Mean scores of ICIQ-MLUTS (men) and ICIQ-FLUTS (women)

The results of the GEE analyses are shown in table 2. As an example of how the regression coefficients can be interpreted, every one point higher change score on the Wexner constipation score is associated with a 0.386 (0.203 – 0.569) points higher LUTS change score ($p < 0.001$) in men.

Also, in women changing from 'having no pelvic pain' to 'having pain' was associated with a 1.801 points higher LUTS change score compared to those who stay pain free.

Table 2. Results from the Generalized Estimating Equations (GEE) analyses

	B	95% CI Lower	95% CI Upper	p-value
MEN				
Fecal Incontinence	0.269	-0.011	0.549	0.059
Constipation	0.386	0.203	0.569	<0.001
Pelvic pain *				
No change (pain-pain)	-0.029	-1.162	1.104	0.960
Deteriorated pain (no pain-pain)	1.607	0.018	3.196	0.047
Improved pain (pain-no pain)	-0.804	-1.710	0.103	0.082
WOMEN				
Fecal Incontinence	0.165	0.028	0.302	0.019
Constipation	0.187	0.095	0.279	<0.001
Pelvic pain *				
No change (pain-pain)	0.149	-0.350	0.648	0.559
Deteriorated pain (no pain-pain)	1.801	0.573	3.029	0.004
Improved pain (pain-no pain)	-0.559	-1.387	0.269	0.186

* Pelvic pain: compared to reference group without pain ('no pain at both time points')

Results

For the current analyses, data from 417 men (age 63.2 \pm 12.7 years) and 566 women (age 58.6 \pm 14.8 years) were available.

Table 1. Scores on the ICIQ-MLUTS and ICIQ-FLUTS for men and women in different age groups at baseline, after 1- and 2-years follow-up

Age at baseline	Men			Women		
	Baseline (n=415)	1 year (n=417)	2 years (n=342)	Baseline (n=565)	1 year (n=566)	2 years (n=439)
LUTS (median (IQR))						
16-35y	4.0 (2.5-5.5)	3.0 (1.5-5.5)	4.0 (2.5-5.0)	6.0 (3.0-8.0)	4.0 (2.0-8.0)	6.0 (3.0-8.0)
35-55y	5.0 (3.0-9.5)	6.0 (2.5-10.0)	6.0 (3.0-10.0)	6.5 (4.0-9.3)	6.0 (3.0-9.0)	7.0 (4.0-9.3)
55-75y	8.0 (4.0-12.0)	9.0 (5.0-13.0)	9.0 (5.0-14.0)	7.0 (4.0-11.0)	8.0 (5.0-11.0)	7.0 (4.0-11.0)
>75y	8.5 (5.0-12.8)	9.0 (6.0-13.0)	10.0 (6.0-15.0)	11.0 (6.0-15.0)	9.5 (5.0-15.0)	9.5 (6.0-14.0)

ICIQ-MLUTS = International Consultation on Incontinence Questionnaire Male Lower Urinary Tract Symptoms Module
FLUTS = Female Lower Urinary Tract Symptoms Modules

Mean change scores for the ICIQ-MLUTS (men) during period 1 and period 2 were 0.71 (0.36 – 1.06), and 0.09 (-0.28 – 0.45) respectively, and the mean change scores for the ICIQ-FLUTS (women) during period 1 and 2 were -0.02 (-0.32 – 0.27), and 0.09 (-0.22 – 0.40) respectively.

Discussion

- First longitudinal prospective study to look at the association of other types of PFS with LUTS
- The results of the GEE analyses suggest that changes in fecal constipation, pelvic pain and fecal incontinence are associated with the change in LUTS scores although whether all these relations are clinically meaningful is up for debate
- Interpretation of the results is complex as these reflect associations of changes between and also within persons
- Relatively short follow-up time of 2 years

Conclusions

- These results show small changes in LUTS scores over time. However, changes in LUTS scores seem to be associated with changes in fecal incontinence, constipation and pelvic pain
- Further analyses are warranted to get more insight into the possible impact of other PFS on the course of LUTS in both men and women

References

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