

INCIDENCE AND PROGRESSION OF URINARY AND FAECAL INCONTINENCE IN WOMEN IN THE COMMUNITY: A LONGITUDINAL STUDY

Hypothesis / aims of study

The aim of this longitudinal study was to determine the incidence of urinary and faecal incontinence and to evaluate risk factors for progressive symptoms in a cohort of women in the community.

Study design, materials and methods

An age-stratified random sample from the electoral roll of 493 women in the community aged 40-79 years underwent an interview applying validated pelvic floor function questionnaires and clinical examination including ICS pelvic organ prolapse quantification (year 1). The interviews and pelvic examination were repeated after one year (year 2). All interviews and examinations were performed by one physician. These women are taking part in a comprehensive longitudinal study of ageing which has been approved by the local ethics committee. Women were divided into age groups (40-49, 50-59, 60-69, 70-79) and groups regarding childbirth (no births, caesarean section, at least one spontaneous or instrumental vaginal delivery). Women who have had previous pelvic floor surgery were excluded, leaving 440 women for analysis. Incidences were calculated as new cases over one year out of women who did not have the symptom in year 1. For each symptom the annual progression rate was computed which was defined as the number of cases with deteriorating symptoms (once or more/week to daily) out of women who complained of symptoms less than once/week in year 1.

Results

Prevalences, incidences and progression rates of urinary and faecal incontinence are presented in Table 1. Stress urinary and faecal incontinence increased significantly from year 1 to 2 (Wilcoxon tests, $p < 0.05$).

Urinary and faecal incontinence prevalence, incidence and progression were NOT associated with:

- age (Chi-square, $p > 0.05$).
- mode of delivery
- age at first delivery

Stress urinary incontinence was associated with:

- BMI 25-30 OR 1.56 (95%CI 1.02-2.37)
- BMI > 30 OR 1.8 (1.1-3.0): univariate regression
- Waist circumference > 88 cm OR 1.6 (1.1-2.4): multivariable regression
- NO association with HRT, smoking, age, mode of delivery

Urge incontinence was associated with:

- use of oestrogen (HRT) OR 2.17 (1.31-3.6)
- NO association with BMI, waist circumference, age, smoking, mode of delivery

Faecal incontinence for loose stool was associated with:

- BMI > 30 OR 2.9 (1.1-7.9): univariate regression
- waist circumference > 88 cm OR 3.64 (1.03-12.86): multivariable regression
- NO association with age, smoking, mode of delivery, HRT

Faecal incontinence for formed stool was associated with:

- current smoking OR 3.57 (1.13-11.34): multivariable regression

- NO association with age, HRT, BMI, waist circumference, mode of delivery

No further variables were found to be associated with incidence or progression of urinary and faecal incontinence.

Table 1

Prevalence, incidence and progression rates of stress urinary incontinence (SUI), urge urinary incontinence (UUI) and faecal incontinence (FI)

| Symptom | Prevalence Year 1 | Incidence new symptoms after 1 year | Progression rate <1/week to ≥1/week or daily |
|------------------------|--------------------------|--|--|
| SUI | 208/443 (47.0%) | 39/235(16.6%) | 17/135 (12.7%) |
| UUI | 134/443 (30.2%) | 51/309 (16.7%) | 11/81 (13.5%) |
| FI loose stool | 30/440 (6.8%) | 14/410 (3.4%) | 1/29 (3.4%) |
| FI formed stool | 19/439 (4.3%) | 16/420 (3.8%) | 1/17 (5.9%) |

Interpretation of results

Contrary to common believe, vaginal deliveries, ageing and age at first delivery were not associated with urinary and faecal incontinence incidences and progression rates in this community-based population aged 40-80 years. Systemic oestrogen significantly increased urge incontinence, whereas obesity was a risk factor for stress and faecal incontinence. Current smoking had an effect on faecal incontinence for formed stool.

Concluding message

Women have to take much greater responsibility for their life-style.