

## SIX-YEAR FOLLOW-UP OF URGE URINARY INCONTINENCE AND BOWEL SYMPTOMS AMONG THE OLDEST OLD

### Hypothesis / aims of study

Urinary and faecal incontinences are known to be associated with mortality in older populations (1) and even independent association has been suggested (2) but otherwise longitudinal data on urinary incontinence and especially bowel symptoms among the aged are scarce. The here was to follow up urge urinary incontinence, faecal incontinence and constipation during a six-year period among the oldest old with a specific focus on newly developed symptoms and the associations of the symptoms with mortality.

### Study design, materials and methods

At baseline, 398 people (171 men and 227 women) aged 70 years and over were interviewed for the third wave of a population-based longitudinal survey. The survey interview was repeated among the 252 survivors (105 men and 147 women) after six years. The response rate for the two waves was 92 %. Both community residing and institutionalized people were included. Urge urinary incontinence was defined as urinary leakage preceded by a strong desire to void and faecal incontinence as involuntary loss of feces in the daytime or during the nights. The severity of urinary and faecal incontinences were categorized as reporting the symptom sometimes or frequently and that of constipation as reporting the symptom sometimes, frequently or nearly always. Dates of death were provided by the National Population Register Centre. Cox proportional hazards models were used to examine the univariate age- and gender-adjusted and multivariate associations of urge urinary incontinence, faecal incontinence and constipation with total mortality. In the multivariate analysis, comorbidity (reporting at least 4 diseases vs 0-3 diseases) and functional ability (poor vs good or moderate vs good) were added into the model. Regarding the relatively small size of the study population, the two genders were analyzed together.

### Results

At baseline, urge urinary incontinence was reported sometimes by 20% (n=81) and frequently by 12 % (n=46) of the respondents. The respective figures for faecal incontinence were 4% (n=16) and 2 % (n=7). Constipation was reported sometimes by 10 % (n=40), frequently by 8 % (n=31) and nearly always by 8 % (n=30) of the respondents, at baseline. At six-year follow-up, 14 % (n=38) of those who did not report urge urinary incontinence at baseline, reported the symptoms sometimes and 3 % (n=8) frequently. The corresponding figures for faecal incontinence were 7 % (n=26) and 2 % (n=8), respectively. Newly developed constipation was reported sometimes by 6 % (n=17), frequently by 1 % (n=3) and nearly always by 6 % (n=16) of the respondents. In the univariate age- and gender-adjusted Cox proportional hazards models, frequently reported urge incontinence (HR [hazard ratio] 2.23; 95 % CI [confidence interval] 1.37-3.61), faecal incontinence (HR 4.99; 95 % CI 2.111-11.79) and constipation (HR 2.07; 95 % CI 1.22-3.52) were associated with six-year mortality. Less frequently reported symptoms did not significantly predict mortality. In the multivariate model, in addition to age (HR 1.91; CI 1.29-2.82) and male gender (HR 1.74; 1.14-2.67), comorbidity (HR 1.86; CI 1.25-2.79) and poor functional ability (HR 3.70; CI 1.92-7.12) remained significantly associated with mortality while urge urinary incontinence, faecal incontinence and constipation lost their predictive power.

### Interpretation of results

During the six year follow-up urge urinary incontinence and bowel symptoms were developed by a significant number of people representing the very oldest proportion of the population. The most severe symptoms at baseline predicted mortality when adjusted for age and gender but lost their predictive power in the multivariate analyses where comorbidity and poor functional ability were also adjusted for.

### Concluding message

Severe urge urinary incontinence and bowel symptoms are significant symptoms among the oldest old and the association of the symptoms with the survival prognosis is mainly explained by comorbidities and overall impaired functioning.

### References

- 1) Age Ageing (1999) 28;301-306.
- 2) Aging Clin Exp Res (2002) 14;412-419.

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**HUMAN SUBJECTS:** This study did not need ethical approval because It was an epidemiological survey. but followed the Declaration of Helsinki Informed consent was obtained from the patients.