

78

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Title: URINARY INCONTINENCE AND RELATED SYMPTOMS IN ELDERLY MEN AND WOMEN STUDIED LONGITUDINALLY BETWEEN 70 AND 97 YEARS OF AGE. A POPULATION STUDY.

Aims of the study:

To assess the prevalence of urinary incontinence among the aged population in Goteborg, Sweden, and how the prevalence change with increasing age. Also to assess the prevalence of indwelling catheter and weak stream among elderly men.

Population and methods:

Goteborg is the second largest city in Sweden, with about 0,5 million inhabitants. This study is part of the gerontological and geriatric population studies in Goteborg, where a random sample of 1148 70-years-olds born in 1901/02 (520 men, 628 women) participated. The survivors have been reinvestigated longitudinally at age 75, 79, 81,85, 88, 90, 92, 95 and 97.

Through the years the main procedures have been as identical as possible. A registered nurse performed an interview, and an examination was then carried out with general a medical examination, blood and urine sampling and other examinations. Questions about urinary incontinence and other urogenital symptoms were asked for by the examining geriatrician (1,2).

Results:

The frequency of urinary incontinence was 48 % among women 70 years of age, but the majority had only occasional leakage (89 %). Men at the same age had urinary incontinence in 17 % and among them only 3 % had it often. Weak stream was a problem among elderly men. At age 70, 30% of the men suffered from weak stream. Urinary catheter was uncommon in this investigation even among the oldest, and only one to five person in each cohort were using an indwelling catheter. Those with longterm catheter had a high mortality. When pooling all ages men with urinary catheter had four times higher odds of dying within three years (95% CI for difference in proportions: 3.43-11.77) and women eleven times higher odds of dying within three years (95% CI for difference in proportions: 4.35-28.82) ($p < 0,001$).

All together 205 persons (70 men and 135 women) were investigated at all ages 70, 75, 79 , 81 and 85. In this group there was not any increase in urinary incontinence with increasing age. This group was followed to 97 years and reinvestigated several times and there was no increase with increasing age among the survivors, but in ages after 90 the number of patients was so low, e.g. only five persons were studied all the way to age 97, that the counting is unsure. There was a clear difference between the prevalence of urinary incontinence in men and women, with a higher prevalence among women at all ages, and the difference did not change with increasing age. The prevalence of weak stream among men was the same between age 70 and 88 and between age 90 and 97, but between age 88 and 90 there was an increase to 70% ($p < 0,001$).

Discussion:

In this study we found that urinary incontinence was common among men and women , and weak stream among men, at age 70 .The frequency of indwelling catheter was low in this group of elderly and we

found that those who had a catheter had a high risk of dying, probably due to the fact that today in Sweden only the very ill get an indwelling catheter. The survivors that were reinvestigated all the way to age 97, had no increase in the prevalence of urinary incontinence. The prevalence of weak stream among men there was an increase, but only between age 88 and 90. Even if the groups were small, especially at ages after 90, there was a strong tendency that there was no increase with increasing age in contrast to cross-section studies where the prevalence increase with increasing age. The reasons for this difference can be many but one of the most obvious reason is probably that these individuals are extremely healthy, which also includes the urogenital organs and there function. Another factor of importance is that these individuals are active and probably seek help if afflicted.

References:

1. Rinder L et al. Acta Med Scand 1975;198:397-407.
2. Steen B, Djurfelt H. Z Gerontol 1993;26:163-9.