

URINARY INCONTINENCE AND SMOKING, STUDIED LONGITUDINALLY IN WOMEN BORN 1930 AND 1940

Hypothesis / aims of study

Smoking has been implicated as a risk factor for urinary incontinence in women although conflicting results have also been reported. The aim of the present study was to investigate, using a longitudinal study design, the prevalence of urinary incontinence and smoking in a sample of women born 1930-1940 over time. A secondary aim was to study the possible influence of smoking on the prevalence of urinary incontinence and mortality.

Study design, materials and methods

Prospective, longitudinal, population-based study in a random sample of women from the birth cohorts 1930 and 1940. The women were invited by letter in 1986 to cooperate in a study of urinary incontinence and other urogenital problems by completing and returning a postal questionnaire. Two thousand women from each cohort received the questionnaire and the response-rate was 81,7 % in women born 1930 and 79,3 % in women born 1940. In the year 2004 the responders who were still alive and still living in Göteborg were requested to complete a similar questionnaire.

Results

1635 women born in 1930 and 1703 women born in 1940 were sent the questionnaire in the year 2004 and the response-rate was 78.8% in the 1930 cohort and 82,3% in women born 1940. In 1986 33% of the responding women were smokers and 12% of them had also urinary incontinence compared to the non-smokers who had urinary incontinence in 11%. In 2004 17% of the women were still smoking and 35% of them were urinary incontinent. Non-smokers and ex-smokers had urinary incontinence in 37% resp.36%. Smokers in 2004 who had smoked for 40 years or more were incontinent in 37% to compare with those who had smoked less than 40 years who were incontinent in 33% (p=0.4). Smokers in 2004 who smoked 20 cigarettes per day or more, had urinary incontinence in 45% while those who smoked less than 20 cigarettes per day were incontinent in 32% (p=0.003). In 1986 there was no difference: 14% and 11%. Of those who smoked in 1986 and were incontinent, 18% were dead in 2004 while 8% of the non-smokers with urinary incontinence were dead in 2004 (p=0.007).

Interpretation of results

In this study we did not find any correlation between smoking and urinary incontinence in the year 1986. In 2004 we found a higher prevalence of urinary incontinence in the group of women who were smoking ≥ 20 cigarettes per day compared to those who smoked less. We also found a higher mortality in those women who were smokers in 1986 and also were incontinent.

Concluding message

There was an association between heavy smoking (≥ 20 per day) and incontinence in the year 2004 but not 1986, indicating that heavy smoking in combination with smoking for many years can be a risk factor for urinary incontinence. We also found a relationship between mortality in smokers with urinary incontinence compared to nonsmokers.

FUNDING: NONE

DISCLOSURES: NONE

HUMAN SUBJECTS: This study was approved by the Forskningsetikommitten i Västra Götaland and followed the Declaration of Helsinki Informed consent was obtained from the patients.