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BASELINE DATA FROM A 15 YEARS PROSPECTIVE COHORT STUDY OF URINARY INCONTINENCE IN MIDDLE-AGED WOMEN

Hypothesis / aims of study

Urinary incontinence is a prevalent problem in middle-aged women, but data on incidence is limited and rarely reported (1). In order to analyze incidence, remission, or development patterns in severity and types of urinary incontinence, we established a 15 years prospective cohort (1997-2012). The Cohort included women 40-45 years old to have a broad approach to women's health including urinary incontinence and other lower urinary tract symptoms.

Study design, materials and methods

The Cohort is based on the publicly managed system for epidemiological research in Norway (CONOR) with a national collection of health data gathered from county studies. Each of the county studies may have local sub-studies for specific purposes, diseases or populations, and our Cohort is one of them. A one-fifth random sample from the county study of Hordaland (HUSK) in 1997-1999 was used to create the Cohort. Both the study population and the Cohort answered a questionnaire with a comprehensive section on lower urinary tract symptoms (LUTS).

Results

Among women born in 1953-1957 (N=14349), a total of 3453 were selected for random sampling to participate in the Cohort, and 2331 (67.5%) of them met. After oral and written information, 2230 (95.7%) consented to take part in the study. The baseline demographic, social, and medical characteristics of these 2230 women were compared with the rest of the women in the source (N=7746). Except for the level of education and yearly family income, there were no significant differences between them (data not shown).

5320 of women in HUSK filled in the LUTS questionnaire. 1920 (36.1%) of them were also in the Cohort, and we compared them with the rest of the participants (N=3400) (Table 1). There were no significant statistical differences between them, except the fractions (28.9 in the Cohort vs. 24.8 in the rest) for urinary continence and distribution of type of incontinence. The differences in other variables, like frequency of urinary incontinence and distribution did not reach statistical significance.

For the first five waves of data collection after baseline (1997-2005) we have a very high response rate (87-93%) and very low frequency of dropouts, which adds more strength to this study. From 2230 women in the beginning, 1758 (78.9%) women have answered all 5 questionnaires, and only 49 (2.2%) women did not answer any of the questionnaires. 363 (16.3%) women did not answer one or some of the questionnaires, 15 (0.7%) women have died, and only 23 (1.1%) women have withdrawn from the study. There is a small amount of missing data (0.8%).

Interpretation of results

The Cohort represents a relatively large random sample of about 15% of total population of women born 1953-57 in the county of Hordaland, which increases the generalization of our findings. The source study had a rather high participation rate of 69.5%, and of those who were invited to participate in the Cohort, almost all agreed to take part. The prevalence of any incontinence is almost identical to EPINCONT, from another county in Norway (2).

Concluding message

We have been able to establish a cohort of more than two thousand women for prospective studies of UI and related topics. The cohort is planned to collect data every second year for the 15 year period 1997-2012. The cohort is population based, with minimal selection bias, and the first ten years has showed very few drop outs and a very high response rate. This cohort is thus a rather unique study in comparison with many other projects with similar purposes.

References

1. Am J Obster Gynecol 2007, 197: 167 e161-165
2. J Clin Epidemiol 2000, 53: 1150-1157

Table 1- Urological characteristics among women in the Cohort compared with the source population (rest of women)

	Rest of women (n = 3400)		**The Cohort (n = 1920)**		**P-value**
	N	**%**	**N**	**%**	
Any urinary incontinence	**844**	24.8	**554**	28.9	0.040
Frequency of incontinence					0.070
<1 / month	252	29.9	204	36.8	
>1 / month	305	36.1	187	33.8	
>1 / week	186	22.0	105	19.0	
Everyday	61	7.2	38	6.9	
Missing	40	4.7	20	3.6	
Amount of leakage, distribution					0.149
Few drops	509	60.3	360	65.0	
Little amount	291	34.5	163	29.4	
Big amount	15	1.8	10	1.8	
Missing	29	3.4	21	3.8	
Incontinence Severity Index (Sandvik index) ISI					0.107
Slight (1-2)	447	53.0	325	61.4	
Moderate (3-6)	305	36.2	177	31.9	
Severe (8-9 &12)*	44	5.2	27	4.9	
Missing	48	5.7	25	2.0	

Incontinence type distribution					0.048
Stress incontinence	437	51.8	307	55.4	
Urge incontinence	68	8.1	61	11.0	
Mixed incontinence	268	31.8	146	26.4	
Could not be classified	71	8.4	40	7.2	
Duration of urinary incontinence					0.875
0-5 years	536	63.5	352	63.5	
5-10 years	171	20.3	111	20.0	
>10 years	86	10.2	52	9.4	
Missing	51	6.0	39	7.0	

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Is this a clinical trial?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
Specify Name of Ethics Committee	**National Ethics Committee of Norway**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**