

PREVALENCE AND RISK FACTORS FOR BOTHERSOME OVERACTIVE BLADDER SYMPTOMS IN THE GENERAL FEMALE POPULATION AGED 45-85.

Hypothesis / aims of study

Overactive bladder (OAB) symptoms are considerable problems for women. According to the International Continence Society (ICS) OAB is defined as urgency with or without urge incontinence, usually with frequency and nocturia.⁽¹⁾

Community based studies showed that the prevalence of OAB symptoms varies between 17 and 49% but only few studies have studied risk factors.^(2,3)

In the present study detailed information on the prevalence of bothersome OAB symptoms as well as a uni- and multivariate model for risk factors is presented.

Study design, materials and methods

The study was cross-sectional in a small town with a homogenic Caucasian population in the Netherlands. All women aged 45 to 85 years registered in eight out of nine general practices were invited to enrol in the study. They filled out standardised questionnaires (IIQ, UDI and DDI). In this study we studied the various OAB symptoms namely urgency, frequency and urge incontinence. Nocturia was not included as we found in an earlier study that it was for a great deal influenced by other factors like insomnia and cardiac status. For this study all symptoms (OAB, vaginal prolapse symptoms) were dichotomized as present and bothersome or absent based on responses to each symptom and degree of bother with these symptoms. Women who answered positive to a certain question but indicated not to be bothered by it were considered as negative (absent). Logistic regression was used for univariate and multivariate analysis, where the variables with a $P < 0.3$ were included in the backward method for multivariate regression analysis.

Results

Of the 2979 women eligible for this study 1397 women filled out the questionnaire. Table 1 shows the characteristics of the women. We found a prevalence of urgency of 34%, frequency of 29% and urge incontinence of 30% and a prevalence for any OAB symptoms (urgency and/or frequency and/or urge incontinence) of 49%. Table 2 shows the multivariate regression analysis of the OAB symptoms. An OR > 1 indicates that a factor is positively correlated with the outcome variable; an OR < 1 that the factor indicates a negative correlation.

Interpretation of results

We found a high prevalence of bothersome OAB symptoms with almost half of the women indicating one or more of the contributing symptoms. Age, BMI, smoking habits, prolapse symptoms and previous incontinence surgery were all positively correlated. No protective factors could be found.

Concluding message

Almost half of the women suffers from at least one bothersome OAB symptom with age, overweight, vaginal bulging and previous incontinence surgery being the most significant risk factors.

Table 1 Women characteristics , details of previous pelvic operations

Number of women	1397
Age (years)	
45-55	647 (46.9%)
56-65	435 (31.5%)
66-75	233 (16.9%)
76-85	66(4.8%)
Parity	
0	120 (8.6%)
1	215 (15.4%)
2	675 (48.3%)
>=3	387 (27.7%)
Body Mass Index (kg/m2)	
<20	53 (3.9%)
20-25	599 (43.9%)
25-30	519 (38.0%)
>=30	193 (14.1%)
Race	
Caukasian	1351 (98.5%)
Non-Caukasian	20 (1.5%)
Smoking	
Smoking in the past	326 (23.6%)
Actual smoking	280 (20.3%)
Postmenopausal status	1009 (72.2%)
Hormone suppletion	88 (6.4%)
Previous gynaecological surgery	
Prolapse surgery	103 (7.4%)
Hysterectomy	234 (16.9%)
Incontinence surgery	47 (3.4%)

Data are presented as number of women (percentage)

Table 2 Predictors on the various OAB symptoms after multivariate regression analysis

		Frequency OR (95% CI)	Urgency OR (95% CI)	Urge incontinence OR (95% CI)
Age (years)	45-55		ref	Ref
	56-65		1.0 (0.8;1.4)	0.8 (0.6;1.1)
	66-75		1.4 (1.0;1.9)	1.2 (0.8;1.7)
	76-85		2.7 (1.5;4.9)	2.0 (1.1;3.5)
Body Mass Index (kg/m2)	<20	0.8 (0.4;1.7)	0.4 (0.2;0.9)	0.7 (0.3;1.5)
	20-25	Ref	Ref	Ref
	25-30	1.6 (1.2;2.1)	1.2 (0.9;1.6)	1.3 (1.0;1.8)
	>=30	1.7 (1.2;2.5)	2.2 (1.5;3.1)	2.0 (1.4;2.9)
Smoking in the past	Yes	1.4 (1.0;1.8)	1.4 (1.1;1.9)	
	No	Ref	Ref	
Actual smoking	Yes		1.7 (1.2;2.3)	
	No		Ref	
Previous incontinence surgery	Yes	2.5 (1.3;4.9)	2.3 (1.4;3.6)	3.6 (1.9;7.0)
	No	Ref	Ref	Ref
Vaginal prolapse symptoms	Yes	2.1 (1.4;3.2)	2.2 (1.4;3.3)	1.5 (1.0;2.4)
	No	Ref	Ref.	Ref
Variance explained by the model		6.4%	8.8%	6.6%

References

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None

Is this a clinical trial?

No

<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	Yes
<i>Specify Name of Ethics Committee</i>	The Medical Ethics Research Committee (METC) of the Erasmus MC in Rotterdam, the Netherlands
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes