42

van Brummen J[1], Bruinse H[1], van de Pol G[1], Heintz P[1], van der Vaart H[1]
1. University Medical Center Utrecht

OAB SYNDROME DURING AND AFTER FIRST PREGNANCY: ASSOCIATED RISK FACTORS AND EFFECT ON THE QUALITY OF LIFE

Hypothesis / aims of study

In non-pregnant young women overactive bladder (OAB) symptoms are perceived as bothersome. The quality of life in these women is more negatively affected by overactive bladder symptoms than by urinary incontinence symptoms. Most research pays attention to postnatal incontinence symptoms and not to overactive bladder symptoms, potential associated factors and the effect of OAB symptoms on the quality of life.

Study design, materials and methods

At 12 weeks gestation, 486 nulliparous women were recruited from ten midwifery practices. The study was approved by the Medical Ethics Committee. All women signed an informed consent. Inclusion criteria were singleton low-risk pregnancy with a sufficient knowledge of the native language. Self-report questionnaires were sent during pregnancy at 12, 24 and 36 weeks gestation. Two questionnaires were sent at 3 and 12 months after delivery. Fifty women (10.3%), who were pregnant again one year after childbirth, were excluded. Thirty-two (6.6%) women did not complete all questionnaires. Four hundred and four (83.1%) women were included in the analysis. Urogenital symptoms were measured with the validated Urogenital Distress Inventory (UDI) [1,2]. The recommended terminology of the ICS for urogenital symptoms was followed. Three symptoms had to be present at the same time: urgency and frequency and urge incontinence. Health-related quality of life (HRQoL) score was assessed with Incontinence Impact Questionnaire (IIQ). The IIQ measures the impact of urogenital symptoms on 5 aspects of the quality of life: physical functioning, emotional functioning, mobility, social functioning and embarrassment. General quality of life was measured using the CES-D and the Maudsley Marital Questionnaire (MMQ) [3]. A higher score on the CES-D is indicative for depressive symptomatology. MMQ is a standardized and validated questionnaire and translated in native language. The MMQ is a 15-item questionnaire assign marital and sexual adjustment, with a nine point (0-8) scale appended to each question. Scores on the sexual function (MMQ-S) scale range from 0 to 40, while those on the marital (MMQ-M) scale range from 0 to 80. Higher scores are indicative of greater adjustment problems. Deliveries performed by midwives and gynecologists are all registered in the Dutch National Obstetric Database (LVR). All obstetrical data of the participants were abstracted from this database. Educational level was dichotomized into primary school and secondary school or higher. Body Mass Index (BMI) was calculated (kg/m^2).Data was analyzed in SPSS 11.5. The values are expressed as means (SE) or numbers (percentages). Continuous variables were compared with Mann Whitney test and categorical variables with Fisher exact test. Odds ratios (OR [95%CI]) were calculated.

Results

Mean age of the study population was 30.3 years (0.17) at delivery, mean gestational age at delivery 278.3 days (0.63), and mean BMI one year postpartum was 23.7 kg/m^2 (0.17). Of the 404 women 371 (91.8%) women did not experience wet OAB during and after pregnancy. Eighteen women (4.5%) developed de novo wet OAB for the first time after childbirth, 13 (2.7%) women only experienced symptoms in pregnancy, and 2 (0.5%) women experienced symptoms during and after childbirth. The associations between de novo wet OAB and obstetrical and maternal factors are shown in table 1. The effect of wet OAB on the quality of life is shown in table 2.

Interpretation of results

Of the twenty women with wet OAB postpartum, 18 (90%) developed the symptoms for the first time after delivery. No associated factors were identified for the development of de novo wet OAB postpartum. Women with de novo wet OAB scored significantly higher, indicating a worse HRQoL, on the IIQ domains mobility and emotional functioning. No effect was found on depressive symptomatology or on the quality of the relation with their partner between women with or without de novo wet OAB.

Concluding message

No associations were identified for the development of de novo wet OAB after first delivery. In young mothers limitations in mobility and emotional functioning due to OAB symptoms are especially stressful.

Table 1 The associations between de novo wet OAB in primiparous women

	No wet OAB	**De novo wet OAB**		
	mean (SE)	*mean (SE)*	*p-value*	*OR [95% CI]*
age (years)	30.6 (0.18)	29.7 (0.61)	0.958	
BMI (kg/m^2)	23.7 (0.19)	23.2 (0.61)	0.285	
gestational age (days)	278.6 (0.68)	279.6 (2.02)	0.966	
second stage of labour (min)	58.3 (2.8)	72.8 (12.7)	0.306	
infant birth weight	3443 (0.33)	3397 (0.84)	0.697	
weight gain	12.3 (0.25)	13.1 (0.97)	0.589	
mode of delivery				
spontaneous	63.2%	72.2%		
instrumental	17.9%	11.1%	0.535	0.54 [0.11-2.48]
caesarean	18.9%	16.7%	1.000	0.76 [0.21-2.79]
perineal condition (after vaginal birth)				
no rupture	31.9%	38.9%		
2nd degree rupture	25.9%	22.2%	0.757	0.70 [0.19-2.50]
3rd/4th degree rupture	4.3%	5.5%	1.000	1.07 [0.12-9.48]
episiotomy	37.9%	33.4%	0.581	0.72 [0.23-2.22]
smoking				
yes	86.7%	76.5%		
no	13.3%	23.5%	0.269	2.00 [0.63-6.41]
alcohol usage				
yes	49.5%	58.8%		
no	50.5%	41.2%	0.470	0.69 [0.26-1.84]
educational level				
primary	4.9%	5.6%		
secondary or higher	95.1%	94.4%	0.602	0.87 [0.11-6.88]

Table 2 Effect of wet OAB on the quality of life

	No wet OAB	**De novo wet OAB**	
	mean (SE)	*mean (SE)*	p-value
IIQ			
mobility	2.33 (0.36)	13.07 (3.95)	0.000
physical functioning	1.37 (0.28)	3.92 (2.84)	0.645
social functioning	0.40 (0.18)	0.98 (0.98)	0.234
emotional functioning	3.61 (0.57)	6.53 (2.70)	0.015
embarassment	5.42 (0.68)	10.78 (4.03)	0.132
CES-D			
total score	6.67 (0.38)	11.06 (2.95)	0.229
MMQ			
M-scale	12.08 (0.54)	15.89 (4.38)	0.944
S-scale	9.10 (0.35)	10.06 (1.82)	0.799

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