

RISK FACTORS FOR OVERACTIVE BLADDER SYNDROME IN WOMEN DURING THE LATE REPRODUCTIVE YEARS

Hypothesis / aims of study

Our aim was to determine the risk factors for overactive bladder syndrome (OAB) in a group of women in the late reproductive years.

Study design, materials and methods

A cross-sectional analysis was performed in an ongoing longitudinal cohort study entitled the Penn Ovarian Aging Study. The Bristol Female Lower Urinary Tract Symptom questionnaire was administered to 300 women between the ages of 43-58 years from August 2007 and November 2007. Overactive bladder syndrome was defined as the presence of urgency with urinary frequency or urgency or urge incontinence based on ICS guidelines.¹ The presence of obstructive sleep apnea, insomnia, anxiety and stress incontinence were determined by use of validated questionnaires. The four menopausal stages: Premenopause, early transition, late transition and menopause were based on the Stages of Reproductive Aging workshop consensus statement.² The presence of hot flashes, caffeine intake and estradiol levels were also assessed. The prevalence of OAB was determined. Risk factors of OAB were determined by univariate analysis and multivariable logistic regression.

Results

Ninety-two women with OAB were compared to 208 women without OAB. Forty seven percent of the women were African Americans and 53% were Caucasian. The prevalence for OAB by age group was as follows: 40-44 years (10%), 45-49 years (48%), 50-54 years (36%) and 55-59 years (6%). The mean age (50.68±3.35 vs. 50.57±3.46) and estradiol levels (41.73±34.7 vs. 40.5±37.7) were similar between the two groups. On univariate analysis, significant associations for OAB were African American race (OR 2.51, 95%CI 1.51; 4.17), hot flashes (OR 2.47, 95%CI 1.43; 4.27), moderate anxiety (OR 2.04, 95%CI 1.18; 3.56), obstructive sleep apnea (OR 1.31, 95%CI 1.05; 1.62), insomnia (OR 2.21, 95%CI 1.30; 3.76) and low income (OR 3.42, 95%CI 1.49; 7.87). Increasing parity (p=0.02) and severity of hot flashes (p<0.001) was also associated with OAB. Menopausal stage (p=0.35), age (p=0.35), stress incontinence (p=0.07) and number of caffeinated beverages/week (p=0.27) were not associated with OAB. On multivariable regression, independent associations for OAB were African American race (OR 1.63, 95%CI 1.42; 4.85), obstructive sleep apnea (OR 1.27, 95%CI 1.01; 1.61), insomnia (OR 2.52, 95%CI 1.38; 4.60), hot flashes (OR 1.85, 95%CI 1.01; 3.40), BMI >35 (OR 3.41, 95%CI: 1.47, 7.93) and ≥ high school education (OR 0.53, 95%CI 0.30; 0.93). Menopausal stage, estradiol levels and anxiety were not associated with OAB on regression analysis.

Interpretation of results

Women in the late reproductive years have unique risk factors for OAB. Even though these women are undergoing significant hormonal changes. Our study did not find a significant association of OAB with estradiol levels and stages of menopause. We did find an independent association of OAB with insomnia, obstructive sleep apnea and hot flashes.

Concluding message

Sleep disorders, hot flashes and BMI>35 are treatable conditions that are associated with OAB in women of late reproductive years.

References

1. Neurourol Urodyn (2002) 21;167–178.
2. Fertil Steril 2001;76:874–8.

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Was informed consent obtained from the patients?	Yes