229

Aoki Y[1], Okada M[1], Matsuta Y[1], Ito H[1], Matsumoto C[2], Kusaka Y[1], Yokoyama O[1]
1. The University of Fukui Faculty of Medical Sciences, 2. The University of Fukui

IS OVERACTIVE BLADDER ANOTHER FACET OF THE METABOLIC SYNDROME? : A CROSS-SECTIONAL STUDY AMONG JAPANESE MEN AND WOMEN.

Hypothesis / aims of study
Metabolic syndrome (MetS) has been implicated in the aetiology of lower urinary symptoms and a few previous epidemiological studies have suggested a relationship between MetS and overactive bladder (OAB) in women [1]. We thus aimed to evaluate the relationship between OAB and MetS or components of MetS among Japanese men and women.

Study design, materials and methods
We collected data on 12,478 individuals (5,313 males and 7,165 females) who participated in a multiphasic health screening in 2015, in Fukui, Japan. As part of a multiphasic health screening, waist circumference, blood pressure, fasting blood sugar, triglycerides and HDL-cholesterol were measured. All participants were asked to answer a standardized self-reported questionnaire for OAB screening (SQOAB, Screening Questionnaire for Overactive Bladder. [2]).

We analyzed the relationships between OAB and other variables including age, gender, waist circumference, high blood pressure, impaired glucose tolerance, and dyslipidemia. The relationships between OAB and MetS were also analyzed. MetS in the Japanese criteria was diagnosed in individuals who had a high waist circumference (≥ 85 cm in men and ≥ 90 cm in women) plus any 2 of the following: (a) high blood pressure (systolic blood pressure ≥ 130/85 mmHg and/or current use of antihypertensive medicine); (b) impaired glucose tolerance (fasting glucose concentration ≥ 110 mg/dL and/or current use of antidiabetic medication); and (c) dyslipidemia (triglyceride concentration ≥ 150 mg/dL and/or HDL-cholesterol level < 40 mg/dL) [3]. The chi-square test and logistic regression modeling were used for statistical analyses. Values of P<0.05 were considered statistically significant.

Results
The median age of participants was 69 (18-95) years. The overall prevalence of OAB and MetS were 13.5% (11.2% for men and 15.2% for women) and 15.2% (24.5% for men and 8.2% for women), respectively. The prevalence was higher in older age groups (Figure).

In the multivariate analysis, a significant association was found between OAB and the following: age (Odds ratio = 1.04) and high waist circumference (1.42) for men, and, age (1.04), high waist circumference (1.42) and hyperglycemia (1.17) for women (Table).

A significant association was found between OAB and MetS. The age-adjusted odds ratio (95%CI) were 1.22 (1.06-1.39) for men and 1.49 (1.21-1.83) for women, respectively.

Interpretation of results
The results from our epidemiological study indicate that OAB can be a marker of MetS.

Concluding message
Our study confirmed the relationship between OAB and MetS in both men and women. This findings suggest that OAB is a facet of the MetS.
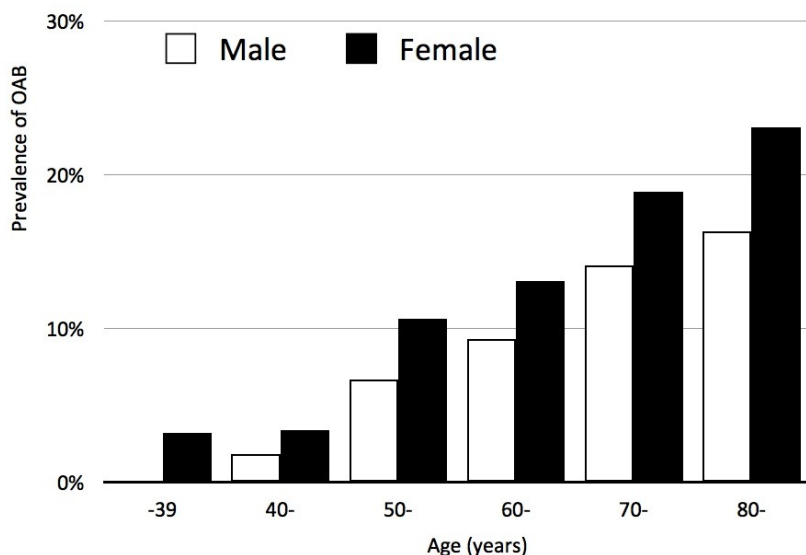

Figure. Prevalence of overactive bladder by age.

Table. Analysis of the association between OAB and components of MetS.

	Univariate			Multivariate		
	Odds ratio	95%CI	p-value	Odds ratio	95%CI	p-value
Male						
Age	1.04	1.04-1.05	<0.01	1.05	1.04-1.06	<0.01
Obesity	1.22	1.03-1.45	0.02	1.24	1.04-1.49	0.02
Hypertension	1.41	1.16-1.71	<0.01	1.17	0.96-1.43	0.13
Hyperglycemia	1.22	1.03-1.46	0.03	1.03	0.86-1.24	0.76
Dyslipidemia	0.95	0.80-1.14	0.58	0.93	0.78-1.12	0.47
Female						
Age	1.04	1.04-1.05	<0.01	1.04	1.03-1.05	<0.01
Obesity	1.63	1.38-1.92	<0.01	1.42	1.20-1.68	<0.01
Hypertension	1.32	1.16-1.51	<0.01	0.97	0.84-1.11	0.64
Hyperglycemia	1.43	1.23-1.66	<0.01	1.17	1.01-1.37	0.04
Dyslipidemia	1.31	1.15-1.50	<0.01	1.10	0.96-1.26	0.19

References
1. Eur Urol 50:581, 2006.
2. Int J Urology 16:126, 2009.
3. Nihon Naika Gakkai Zasshi. 94:794, 2005.