Abstract #741

Prevalence, impact on daily life and associated factors of overactive bladder in Japan : Results of the 2023 Japan Community Health Survey (JaCS 2023)

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Hypothesis / aims of study

The prevalence of overactive bladder (OAB) increases with age, and treating OAB is important for achieving a long and healthy life, especially in Japan, which is experiencing a super-aging society. In Japan, an epidemiological survey was conducted in 2002, and it revealed the prevalence of lower urinary tract symptoms (LUTS), including OAB, in Japan and their impact on daily life[1]. However, more than 20 years have passed since that survey, and Japan has become an unprecedentedly aging society compared with other developed countries. In this study, A large-scale nationwide epidemiological survey of LUTS was conducted via the internet in 2023 to clarify the current prevalence of LUTS and evaluate its impact on daily life in Japan. The Japanese Continence Society decided to conduct an epidemiological survey on LUTS through internet research in 2023, which marked its 50th anniversary[2].

Study design, materials and methods

An online survey of individuals aged 20–99 years old, who had anonymously registered with the web panel of an online Japanese research company (Macromill, Inc., Tokyo, Japan) and had the ability to read, write, and understand Japanese, was conducted between May 31 and June 5, 2023.

All questions concerning LUTS, including OAB, and daily life referred to the previous month. OAB was diagnosed according to the OAB symptom score definition, which is based on the presence of urgency (once or more/week) and any symptoms of daytime urinary frequency (≥8 times/daytime), nocturia (≥1 time/night), urgency, or urgency urinary incontinence[3].

The global impact of urinary symptoms on daily life was assessed using the following question: “During the past month, how much influence on your general daily life have you felt due to urinary problems?”. The questions assessing attitudes toward treatment-seeking included whether the subject had sought medical care and any reasons they had for not seeking medical care.

To be evaluated for associated factors with OAB using univariate and multivariate analyses, deficit items were further categorized as follows: frailty (PS ≥1, relatively poor or poor health status, weight loss, reduced walking speed, falls, or infrequent exercise), metabolic syndrome-related diseases (hypertension, hyperlipidemia, or diabetes mellitus), cardiorenal disorders (heart failure, angina pectoris/myocardial infarction, or chronic kidney disease), neurological disorders (stroke, spine or spinal cord disorders, or neurological diseases such as Parkinson’s disease), depression/anxiety/sleep disorders (depression, anxiety, sleep apnea syndrome, or insomnia), anorectal dysfunction (fecal incontinence or constipation), benign prostatic hyperplasia (BPH, for men) and erectile dysfunction (for men), and parity, menopause, and pelvic organ prolapse (POP, for women).

Results

A total of 6210 participants (3088 females and 3122 males), who were selected by probability sampling based on the composition of the Japanese population (age range: 20 to 99), were recruited.

The prevalence of OAB is shown in Fig 1A. It was 11.9% in the subjects aged ≥20s and 13.8% in those aged ≥40s. The prevalence of OAB gradually increased with age. Among the subjects with OAB symptoms, urgency urinary incontinence was identified in 69.8% (males: 64.3%, females: 77.6%). The prevalence of urgency urinary incontinence in individuals with OAB also increased with age.

This study also showed that OAB negatively affected daily life. The results regarding the global impact of OAB on daily life are shown in Figs 1B and 1C. OAB were reported to impact on daily life in 51.1% of subjects (slightly affected, 39.3%; moderately affected, 8.1%; and severely affected, 3.7%). The impact rate was observed among almost all generation in both sexes.

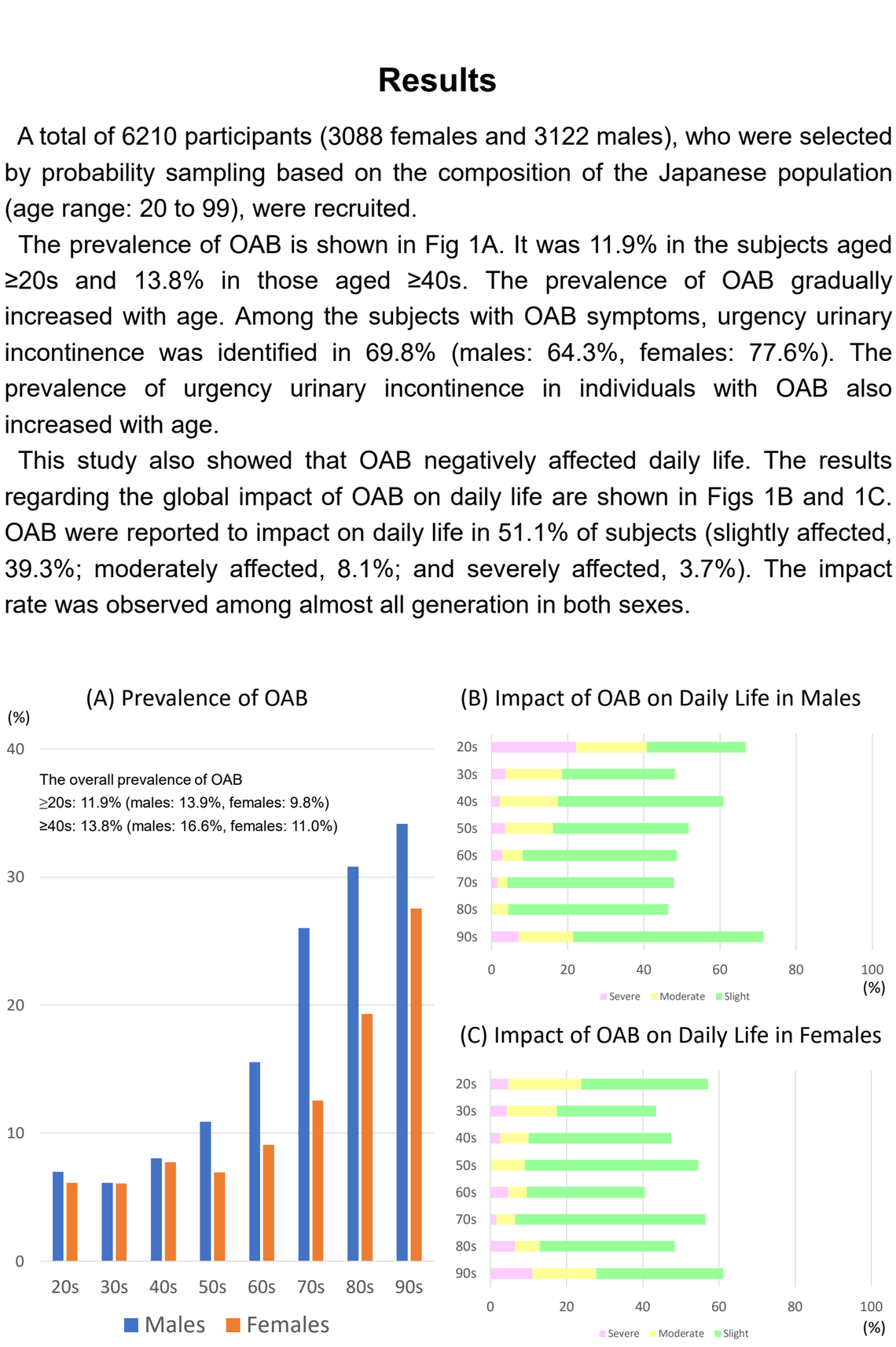

Fig.1 The prevalence of OAB and the global impact of OAB on daily life

In this survey, only 16.0% of participants with OAB (20.3% of males and 9.7% of females) were visiting medical doctors to receive treatment for OAB. When participants with a history of visiting a physician to receive treatment for OAB were included, the percentage of physician visits remained only 33.7% (37.6% in males and 28.3% in females). The percentage of subjects who visited a physician to receive treatment for OAB increased with age (Fig. 2).

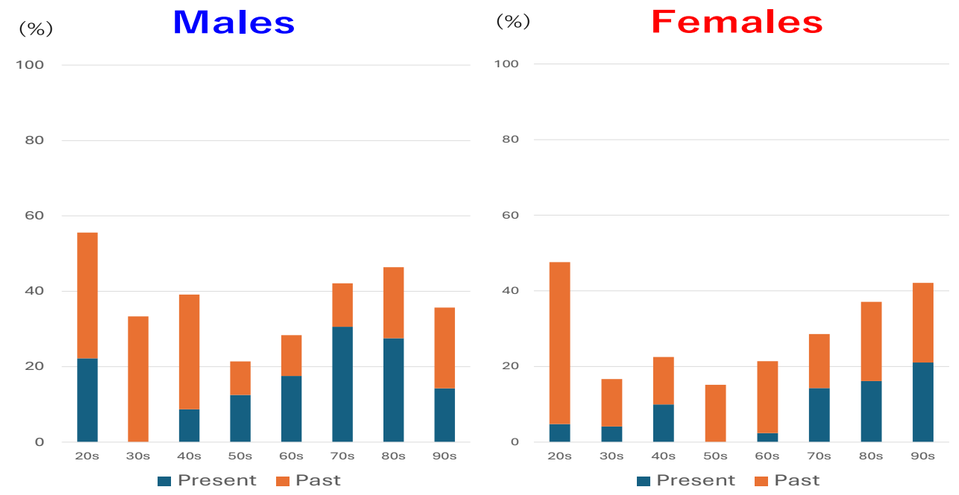

Fig.2 Physician visits for the treatment of OAB

Univariate analysis showed significant differences between the OAB and non-OAB groups for almost all variables evaluated in both sexes. Multivariate regression analysis showed that all variables except body mass index and cardiovascular diseases in men were associated factors of OAB. On the other hand, the following variables were identified as associated factors of OAB in women; age, frailty, cardiovascular diseases, neurologic disorders, anorectal dysfunction, POP and parity (≥3times). (Table)

Table . Results of univariate and multivariate analysis

	Men								
	Univariate analysis					Multivariate analysis			
	OAB		Non-OAB		p-value	Odds ratio	95% CI		p-value
Age	63.44	(17.52)	51.55	(17.42)	<0.0001	1.02	(1.02 , 1.03)		<0.0001
BMI	23.45	(3.51)	23.42	(7.31)	0.9447	1.01	(0.99 , 1.05)		0.5228
	Odds ratio	95% CI			p	Odds ratio	95% CI		p
Frailty	3.42	(2.37 , 4.94)			<0.0001	2.02	(1.36 , 3.10)		0.0003
Metabolic syndrome	3.39	(2.75 , 4.18)			<0.0001	1.58	(1.21 , 2.06)		0.0007
Cardiovascular diseases	3.86	(2.86 , 5.22)			<0.0001	1.16	(0.79 , 1.68)		0.4562
Neurologic disorders	5.12	(3.74 , 7.01)			<0.0001	1.69	(1.13 , 2.52)		0.0119
Depression/anxiety/ sleep disorders	3.01	(2.36 , 3.83)			<0.0001	2.34	(1.71 , 3.19)		<0.0001
Anorectal dysfunction	4.59	(3.55 , 5.93)			<0.0001	2.03	(1.47 , 2.80)		<0.0001
Benign prostatic hyperplasia	7.02	(5.30 , 9.30)			<0.0001	2.18	(1.54 , 3.08)		<0.0001
Erectile dysfunction	3.43	(2.75 , 4.29)			<0.0001	1.80	(1.39 , 2.33)		<0.0001
	Women								
	Univariate analysis					Multivariate analysis			
	OAB		Non-OAB		p-value	Odds ratio	95% CI		p-value
Age	62.90	(19.43)	54.29	(18.40)	<0.0001	1.01	(1.00 , 1.03)		0.0193
BMI	22.81	(5.01)	21.59	(9.08)	0.0211	1.01	(0.99 , 1.02)		0.3435
	Odds ratio	95% CI			p	Odds ratio	95% CI		p
Frailty	2.44	(1.70 , 3.49)			<0.0001	1.75	(1.18 , 2.68)		0.0045
Metabolic syndrome	2.52	(1.98 , 3.22)			<0.0001	1.17	(0.85 , 1.61)		1.17111
Cardiovascular diseases	3.87	(2.54 , 5.89)			<0.0001	2.03	(1.17 , 3.42)		0.0123
Neurologic disorders	4.06	(2.77 , 5.95)			<0.0001	2.37	(1.45 , 3.78)		0.0007
Depression/anxiety/ sleep disorders	2.04	(1.50 , 2.78)			<0.0001	1.31	(0.83 , 1.81)		0.2908
Anorectal dysfunction	2.78	(2.13 , 3.63)			<0.0001	1.90	(1.36 , 2.63)		0.0002
Pelvic organ prolapse	2.39	(1.55 , 3.69)			<0.0001	2.13	(1.27 , 3.46)		0.0049
Parity									
1-2 times	1.17	(0.88 , 1.55)			0.2864	0.79	(0.57 , 1.11)		0.1778
≥3 times	2.43	(1.73 , 3.41)			<0.0001	1.57	(1.04 , 2.35)		0.0319
Menopause	2.19	(1.66 , 2.90)			<0.0001	1.23	(0.80 , 1.89)		0.3485

Interpretation

The rate of OAB at the present survey was almost same as the 2002 epidemiological survey[1]. However, the number of OAB patients was increasing, partly due to the aging of the population. In fact, based on the vital statistics of Japan for 2022, there could be 12.5 million OAB patients aged ≥20s and 10.8 million aged ≥40s. Interestingly, the present epidemiological survey revealed that among the subjects aged 20-39 the prevalence of OAB was 6-7% in both males and females. In addition, there were no sex-related differences in the prevalence rates of OAB symptoms under aged 40s, but it was more common in males than females after aged 50s, which may be related to BPH. Thus, there are many males and females of all ages with OAB.

On the other hand, the percentage of subjects that were visiting physicians to receive treatment for OAB was still low, although this increased with age in both sexes. We believe that further educational activities about OAB are necessary because some of these patients considered that OAB were not diseases or that OAB are a normal consequence of aging.

Conclusions

The prevalence of OAB increased with age and negatively affected daily life. Then, there were several associated factors of OAB that were identified in this study. However, since the percentage of patients that visit a physician to receive treatment for OAB remains low, further educational activities regarding OAB are necessary.

References

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