

CATEGORIZATION OF THE OVERACTIVE BLADDER AND THE RELATED BEHAVIOUR OF SEEKING MEDICAL THERAPY IN THE GENERAL POPULATION – HONG KONG STUDY

Hypothesis / aims of study

Overactive bladder(OAB) is often quoted as a common but under-reported illness, which may be consequential to its variant degree of severity and hence varied bother and impact on different individuals, including the behaviour of seeking medical therapy. Herein, we categorize OAB in the general population as measured by the Overactive Bladder Symptom Score (OABSS)¹ into different grades of severity and explore its relationship to the behaviour of seeking medical advice and therapy.

Study design, materials and methods

A whole territory population-based cross-sectional telephone survey of OAB was conducted from January to February 2009 to investigate its prevalence and the degree of severity for the age group 40 – 79. Upon successful contact, the subjects would be screened for any storage lower urinary tract symptoms (storage LUTS) and OAB based on ICS 2002 definitions. Subjects having OAB were then explained about the purpose of OABSS and were asked to answer the 4 questions of OABSS (max. score: 14 marks; range 0–14). The effect of OAB on 6 categories of the quality of life (QoL) { inconvenience caused by OAB, negative impact on job and daily life, sleep deprivation, limitation of outdoor activities, frequent need to locate washrooms, psychological disturbance and distress} of the subjects were evaluated. Medical seeking behaviour and general awareness of OAB were also explored. OAB subjects with stress incontinence, diabetes mellitus (DM), concurrent cystitis and bladder stone disease were excluded for analysis. Four groups of OAB subjects are categorized in accordance with their OABSS (very mild OAB: OABSS ≤ 2; mild OAB: OABSS 3–5; moderate OAB: OABSS 6–9; severe OAB: OABSS ≥ 10). Multivariate logistic regression analysis using backward stepwise likelihood ratio method is performed to evaluate the variable(s) predicting the decision of visiting clinician for the treatment of OAB. The variables are: gender, age(<60 vs ≥60), severity of OAB (OABSS≤5 vs OABSS≥6), duration of OAB (≤24 months vs >24 months), the presence of urgency incontinence, number of categories of quality of life being affected by OAB (≤2 categories vs ≥3 categories) and understanding of the term OAB. 2250 households with eligible subjects were contacted. 1372(61.0%) eligible subjects agreed to participate in the survey. 535(39.0%) participants had storage LUTS without other concomitant illnesses. Of them, 256 were men (mean age 60.0, SD10.5, range 40-79), 279 were women (mean age 56.5, SD10.2, range 40-79).

Results

The overall prevalence of OAB is 14.5% (95%CI: 12.7%-16.5%) and its corresponding aged standardized prevalence is 13.1% (95%CI: 11.3%-15.0%). 33% OAB was developed in 12 months and 47.2% in 24 months preceding the survey respectively. The stratification of the overall prevalence of storage LUTS, OABtotal, the ratio of OABwet to OABtotal, duration of illness and OABSS into age and gender group is shown in the Table 1.

Table 1.

Age group Gender	40 - 49		50 - 59		60 - 69		70 - 79		p-value
	Men	Women	Men	Women	Men	Women	Men	Women	
Number of participants	156	264	185	275	166	129	113	84	
Subjects having Storage LUTS(%)	53(34.0)	88(33.3)	71(38.4)	100(36.4)	76(45.8)	52(40.3)	56(49.6)	39(46.4)	0.112
Subjects having OAB(%)	8(5.1)	22(8.3)	22(11.9)	44(16.0)	34(20.5)	20(15.5)	29(25.7)	20(23.8)	<0.001
OABwet / OABtotal (%)	37.5	36.4	31.8	54.5	35.3	50.0	51.7	55.0	0.15
Median duration of OAB(months)(range)	15 (1 – 336)	36 (6 – 480)	30 (1 – 240)	36 (2 – 360)	24 (3 – 720)	36 (1 – 360)	36 (3 – 340)	30 (4 – 600)	0.39
(%)OAB symptoms ≤ 1 year	50.0	17.6	45.0	20.6	43.3	38.5	28.0	42.9	0.27
Median OABSS of OAB subjects (range)	3.5 (1-10)	3.5 (1-6)	4.0 (2-9)	4.0 (1-14)	5.0 (1-13)	3.0 (1-10)	5.0 (1-14)	4.0 (1-14)	0.03

Of the OAB subjects, the overall mean OABSS is 4.78 (range 1-14). Of the 6 categories of QoL being affected by OAB, 77(38.7%) subjects had none of the categories of QoL affected by their OAB, 40(20.1%) had only 1 category affected, 36(18.1%) had 2 categories affected, 28(14.1%) had 3-4 categories affected and 18(9.0%) had 5-6 categories affected. The OABSS bears significant correlation relationship with the number of categories of quality of life affected (Pearson R = 0.40, p<0.001). The results of different grades of OAB in the general population are shown in Table 2.

Table 2. Severity of OAB in the general population in relation to duration of illness, QoL affected, medical seeking behaviour, treatment of OAB and understanding of OAB

	Severity of OAB in the general population				
	Very mild OAB OABSS ≤ 2	Mild OAB OABSS 3 – 5	Moderate OAB OABSS 6 – 9	Severe OAB OABSS ≥ 10	p-value
Number of subjects(%)	37(18.6)	100(50.3)	48(24.1)	14(7.0)	
Male(%) : Female(%)	13(35):24(65)	42(42):58(58)	29(60):19(40)	9(64):5(36)	0.041

Age < 60(%) : Age ≥ 60(%)	20(54):17(46)	50(50):50(50)	23(48):25(52)	3(21):11(79)	0.09
Median duration(months) of OAB(range)	24(1-720)	36(1-600)	24(2-360)	66(6-336)	0.12
OABwet(%) : OABdry(%)	16(43):21(57)	36(36):64(64)	27(56):21(44)	11(79):3(21)	0.007
No bother(%) : At least some bother(%)	31(84):6(16)	64(64):36(36)	23(48):25(52)	4(29):10(71)	<0.001
Median No. of category of QoL affected(range)	0(0-5)	1(0-6)	2(0-6)	4(0-6)	<0.001
No. consulted clinician (%)	5(13.5)	13(13.0)	11(22.9)	7(50.0)	0.005
No. received therapy for OAB (%)	9(24.3)	16(16.0)	17(35.4)	7(50.0)	0.008
No. never heard of the term OAB(%)	19(51.4)	51(51.0)	25(52.1)	7(50.0)	0.998
No. understood the term OAB (%)	9(24.3)	23(23.0)	11(22.9)	5(35.7)	0.738

Table 3. Result of Logistic Regression Analysis

95% CI for Odds Ratio (OR): consult clinician to treat OAB				
Included	B (SE)	Lower	Odds Ratio	Upper
Constant	-1.86(0.29)			
OABSS≥6	1.17(0.41)	1.45	3.21	7.14

Of the various variables listed in previous section, only OABSS ≥ 6 is statistically significant in predicting the decision of consulting clinicians for the treatment of OAB {OR: 3.21 (95% CI: 1.45–7.14)}.

Interpretation of results

OAB is commonly affecting men and women with a predilection for the aging population. Roughly half of the peri-menopausal and post-menopausal OAB women have urgency incontinence. That also happened to men after their 7th decade of life. Apparently men are bothered by more severe OAB than are women. However, the gender, age of subjects, duration of symptoms, sole presence of OAB, occurrence of urgency incontinence and knowledge / awareness / understanding of the term OAB are not the determinants for seeking medical advice and treatment in our survey. In fact, ~40% OAB subjects in the general population do not consider their QoL having ever been affected by OAB, ~70% OAB subjects are having the illness limited to the mild degree and only ~13% of them have consulted clinicians for their problems. In contrast, the remaining 30% OAB subjects (≥moderate degree) are more bothered by their OAB and thereby more motivated to seek medical therapy. Severity of OAB is gauged by its bothersomeness to the subjects and the number of categories of quality of life being affected by OAB. OABSS is a good instrument that can be used to grade the severity of OAB. Subjects of OABSS ≥ 10 are most eager to seek medical advice and try drug therapy. However, this group constituted only a minority of OAB subjects in HK (7% of OAB subjects). It also appears that the severity of OAB as measured by OABSS bears NO relationship to the duration of the illness. Further longitudinal study is highly anticipated to evaluate if the severity of OAB will progress with time if OAB is left untreated.

Concluding message

In our survey, OAB is largely of mild degree in the general population. Although the prevalence of OAB is similar worldwide^{2,3}, its respective severity may not be the same across different countries and hence may be making different impact and request for medical therapy. For this sake, categorization of OAB in the general population based on the different grades of its severity is highly recommended when comparison of the impact of OAB on different populations is made. OABSS may be one of the tools that can serve this purpose.

References

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<i>Was the Declaration of Helsinki followed?</i>	Yes
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