Treatment strategy of targeting symptoms that each patient wants to be treated most will bring the best improvement in overall quality of life for individual OAB patients

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Hypothesis / aims of study

- Since overactive bladder (OAB) is a condition that harms quality of life (QOL), we hypothesized that the treatment will be the most efficient in targeting symptoms that each patient suffers most and wants to be treated. In order to understand the most suffering symptoms, we have reported the utility of our validated questionnaire using 100-mm line of visual analogue scale (VAS), which can assess bother or satisfaction regarding patient QOL specific to OAB-symptom [1,2].
- Aim of this study was to assess our hypothesis that is whether treatment strategy of targeting symptoms that each patient wants to be treated most will bring the best improvement in overall QOL for individual patients.

Study design, materials and methods

- Before and after the treatment, all patients were answered OAB Symptom Score (OABSS; Fig.1a), OABSS-VAS (Fig.1b) and overall QOL with visual analog scale(QOL-VAS; Fig.1c). [1] [2]
- OABSS-VAS is the QOL questionnaire specific to each of the OABSS-questions with visual analogue scale of a 100-mm line.
- Statistical correlation to the improvement (i.e. change of pre- to post-treatment) of overall QOL by improvement of either each items of OABSS or OABSS-VAS measure were analysed.

Fig.1a: Overactive blader Symptom Score (OABSS)

Question	Freqency	score
Q1. How many times do you typically urinate from waking in the morning to going to sleep at night?	7 or less	0
	8-14	1
	15 or more	2
Q2. How many times do you typically wake up to urinate at night?	None	0
	1	1
	2	2
	3 or more	3
Q3. How often do you have a sudden desire to urinate that is difficult to defer?	None	0
	Less than once a week	1
	Once a week or more	2
	About once a day	3
	2-4 times a day	4
	5 times a day or more	5
Q4. How often do you leak urine because you connot defer the sudden desire to urinate?	None	0
	Less than once a week	1
	Once a week or more	2
	About once a day	3
	2-4 times a day	4
	5 times a day or more	5

Fig.1b: OABSS-VAS
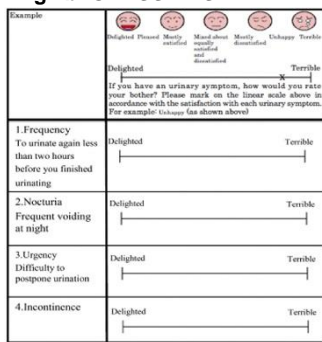
Fig.1c: QOL-VAS
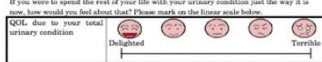
Table 1: Patients' demographic data

Total number	n=336		
Treatment methods	Anticholinergic n=202	β3 stimulant n=81	Others n=53
Median age (y.o.)	70 (30-91)		
Average treatment period (months)	1.77 ± 0.84		

- Total of 336 female patients were analysed.
- The median age of patients was 70 (30-91) y.o.
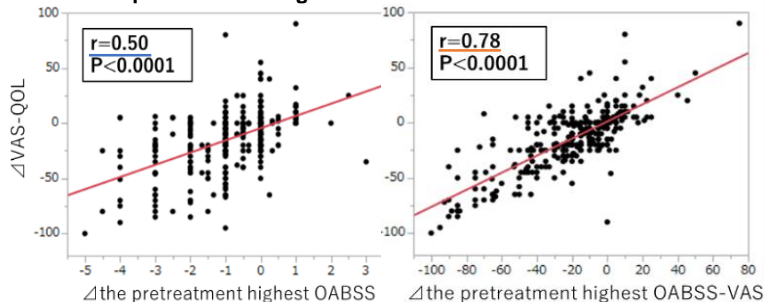- The average treatment period was 1.77±0.84 mo. (Table 1)

Result

Fig.2: Change of OABSS and OABSS-VAS before and after treatment
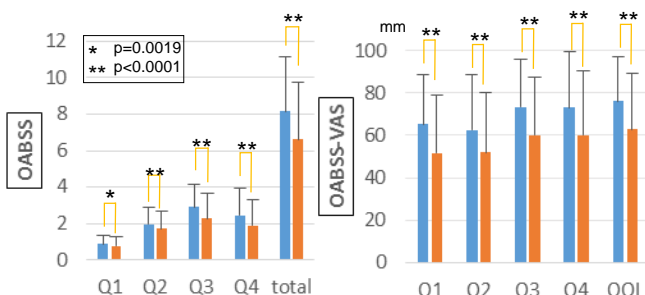
- There were significant improvement in each OAB Symptom Score and OABSS-VAS measure after treatment.

Fig.3: The correlation to improvement of QOL-VAS with improvement of pre-treatment highest OABSS and OABSS-VAS

- When focusing on the correlation to the improvement(Δ) of QOL-VAS, OABSS-VAS measure(right figure) had more significant correlation to the improvement(Δ) of QOL-VAS than OAB Symptom-Score(left figure).
- The highest OABSS-VAS measure successfully identified the most suffering symptom.

Table 2: The correlations to improvement of QOL-VAS with ΔOABSS and OABSS-VAS

ΔOABSS	r	p-value	ΔOABSS-VAS	r	p-value
Δ Q1	0.09	0.0983	Δ Q1	0.66	<0.0001
Δ Q2	0.30	<0.0001	Δ Q2	0.56	<0.0001
Δ Q3	0.53	<0.0001	Δ Q3	0.82	<0.0001
Δ Q4	0.51	<0.0001	Δ Q4	0.79	<0.0001

- Table 2 demonstrates the statistical correlation(r) with the improvement(Δ) of overall QOL by the improvement of each OABSS and OABSS-VAS question, respectively.
- This indicates the improvement of OABSS-VAS significantly predict the improvement of overall QOL in all 4 symptoms of OAB.

Interpretation of results

- Our validated VAS-questionnaire (OABSS-VAS) can assess bother or satisfaction regarding patient QOL specific to each OAB-symptoms.
- This study showed that the improvement of the key symptom has the most impact on improvement of the overall QOL.
- Common questionnaire, such as OABSS, would provides the information of the symptom severity.
  However, using only such symptom-severity-based questionnaire, we might can't recognize the key symptom which patient suffering most and wants to be treated.
- Use of OABSS-VAS would contribute to appropriate selection of the therapeutic targeting-symptom with significant severity to impact on patients' specific QOL or bother. Our results supports that concomitant use of both OABSS and OABSS-VAS.

Concluding message

- The concomitant use of OABSS (which represents the symptom severity) with OABSS-VAS (which represents the symptom-specific QOL or bother) contributed to identify the key symptom which an individual patient suffers most and wants to be treated.
- The improvement of the key-targeting-symptom of individuals significantly correlated with the clinical goal of the improvement of overall QOL in patients with OAB.

1) Homma Y, et al Urology 68: 318, 2006   2) Fujihara A, et al. J Urol 189, 1797, 2012