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OBSERVATION OF IMIDAFENACIN'S EFFECTS ON PATIENTS WITH OVERACTIVE BLADDER SYNDROME WHO RECORDED THE LEVEL OF THEIR URINARY SENSATION AND FREQUENCY ON BLADDER DIARIES.

Hypothesis / aims of study
Antimuscarinic drugs are mainly used for medical treatment of overactive bladder syndrome. The basic effects of antimuscarinic drugs are inhibiting bladder muscarinic receptors to restrain smooth muscle contractions caused by acetylcholine and reducing detrusor overactivity. In addition to these effects, it is reported recently of antimuscarinic drugs that C-fiber neuronal activity electrical potential is also reduced so that urinary sensation is lessened. This study examines the effects of Imidafenacin on bladder sensation in patients who have overactive bladder syndrome.

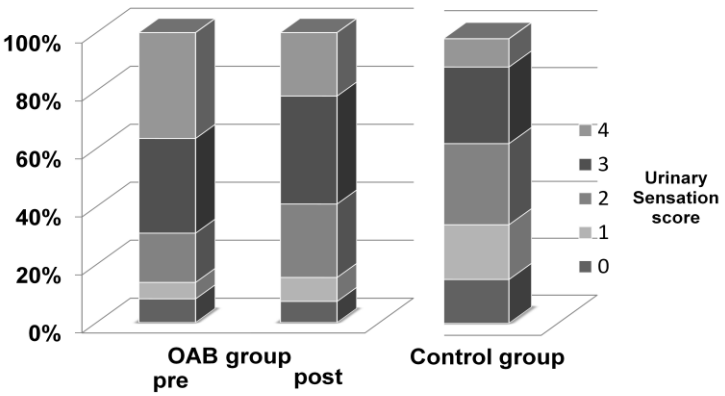
Study design, materials and methods
54 cases of patients who were experiencing urinary urgency more than once a week, who urinated more than 8 times a day and had symptoms of uncomfortableness during urine storage phase were examined along with 36 control subjects. Subjects recorded their number of times of urination, their amount of urine, and the strength of their bladder sensation on a bladder diary. During that time, 0.2mg/day of Imidafenacin was prescribed for 2 to 4 weeks. The strength of the need to void was graded on a 5 degree scale: from 0 to 4, Grade0:no bladder sensation,1:first sensation of bladder filling(voiding can be delayed 60 min),2:first desire to void(voiding can be delayed for 30 min),3:strong desire to void(voiding cannot be delayed>15 min),4:"urgent"desire to void(voiding cannot be delayed for >5 min). The OABSS of the subjects and the control group were compared; moreover, subjects were examined before and after the treatment according to bladder sensation, the amount of urine for each bladder voiding and OABSS. The data recorded in the bladder diary included the desire to void which graded each time urination occurred.

Results
As for the control subjects, the stronger the bladder sensation (higher grade of urination urgency) was, the greater the amount of urine that was voided, but compared to the control subjects, the OAB group urinated a smaller amount, even though the bladder sensation was strong. Also, the OAB group urinated more frequently compared to the control group and the average grade of the desire of urinate was also higher, as shown in Table 1. However, after Imidafenacin was prescribed to the OAB group, the average grade of bladder sensation decreased and the total number of urinations also decreased, as shown in Table 2. In addition, each subject's OABSS decreased.

Interpretation of results
It is therefore indicated that the strength of bladder sensation according to the amount of urine volume decreased as a result of Imidafenacin treatment.

Concluding message
OAB patients urinated with strong bladder sensation, but after Imidafenacin was prescribed, the bladder's ability to hold urine against threshold value of bladder sensation increased because of an increase in bladder capacity. Imidafenacin is, therefore, shown to be effective in inhibiting bladder sensation.

Table1:



n	54	54	36
Total number of urination	600	521	305
Average urinary sensation	2.8±1.2	2.6±1.1	2.0±1.2

Table2:

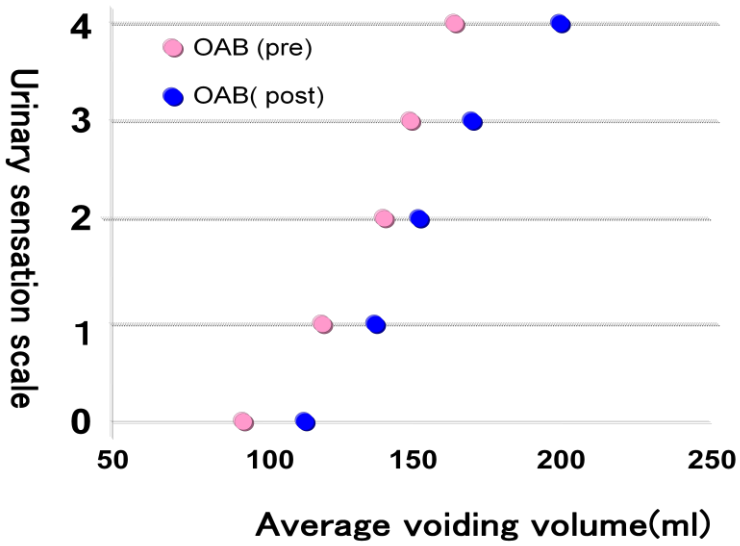


Table3:

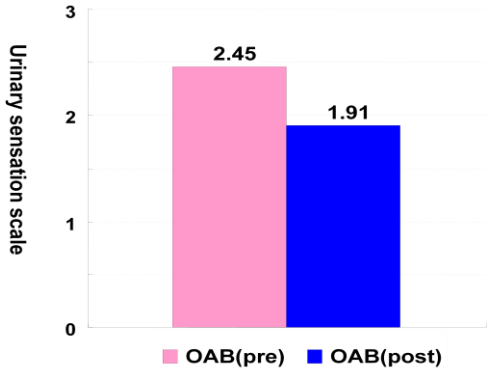


Table 1: Percentages of bladder sensation scores, shown by differing color bands, among each study group's urinations.
Table 2: Relationships between bladder sensation and average urine volume per urination before and after treatment.
Table 3: Bladder sensation scale per 100ml of urine.

References

1. Starkman JS et Neurourology and Urodynamics 27:13–21 (2008)

Specify source of funding or grant	**NONE**
Is this a clinical trial?	**Yes**
Is this study registered in a public clinical trials registry?	**No**

Is this a Randomised Controlled Trial (RCT)?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**No**
This study did not require ethics committee approval because	**we examined usual treatment by usual medicine and a questionnaire.**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**