

# Association between irritable bowel syndrome and overactive bladder: research survey.

Kyu Shik Kim, Hyung-Jee Kim<sup>1</sup>, Seong Ho Lee<sup>2</sup>,

Sung Tae Cho<sup>2</sup>, Hong Sang Moon

Department of Urology, Hanyang University College of Medicine, Seoul, 1Department of Urology,

Dankook University College of Medicine, Cheonan, 2Department of Urology, Hallym University College of Medicine, Seoul, Korea

## Introduction

● Couple of study showed the relationship between irritable bowel syndrome (IBS) and overactive bladder (OAB) (1). However, exact relationship between OAB and IBS and its mechanism were not found. We investigated the relationship between irritable bowel syndrome (IBS) and overactive bladder (OAB) in men and women by using questionnaires.

## Material and Methods

- This research survey was based on multicenter and conducted among men and women attending the health care center with over 20 years old.
- Korean version of the Rome III criteria for the diagnosis of IBS, overactive bladder symptom score (OABSS) was used for screening OAB, Self-Rating Depression Scale (SDS) for depressive symptoms, and International prostate symptom score & Quality of life (IPSS & QoL) for checking the degrees of lower urinary tract symptom

## Results

- Total number of 609 (men: 257, women :352) people answered the questionnaire. The prevalence of IBS and OAB was 31.9% (men vs. women : 27.3% vs. 39.2%) and 19.2% (men vs. women : 25.3% vs. 18.5%), respectively. Among OAB patients, 25.6% had IBS.
- Comparing OABSS between IBS and non-IBS were  $1.70 \pm 2.48$  vs.  $2.48 \pm 2.79$  ( $p < 0.001$ ).
- OABSS question number 3 were 0.69 vs. 0.87 ( $p = 0.08$ ). In SDS, IBS had higher score than non-IBS ( $n = 201$ ) ( $44.92 \pm 13.71$  vs.  $39.19 \pm 10.39$ ,  $p < 0.001$ ).
- In men, non-IBS ( $n = 56$ ) had higher OABSS and OABSS question number 3 than IBS (OABSS :  $2.56 \pm 2.69$  vs.  $1.57 \pm 2.43$ ,  $p = 0.01$ , OABSS q3 :  $0.92 \pm 1.26$  vs.  $0.66 \pm 1.13$ ,  $p = 0.17$ ). Also in women, non-IBS ( $n = 214$ ) had higher OABSS and OABSS question number 3 than IBS ( $n = 138$ ) (OABSS :  $2.40 \pm 2.87$  vs.  $1.76 \pm 2.52$ ,  $p = 0.03$ , OABSS q3 :  $0.83 \pm 1.25$  vs.  $0.70 \pm 1.18$ ,  $p = 0.32$ ).

## Conclusion

- IBS in the adult had no relationship with OAB in our study. These data suggest more studies are need to figure out relationship between IBS and OAB.

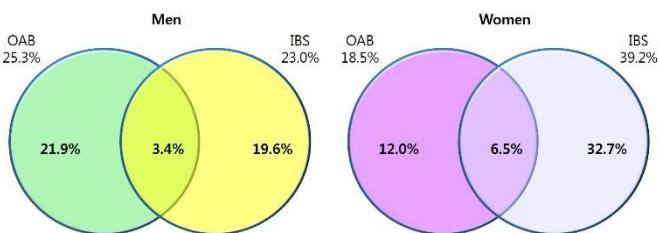


Fig 1. The overall prevalence of OAB and IBS

Table 1. Comparison of questionnaire responses in IBS and non-IBS groups of male and female OAB patients.

	Normal (men, n=199)	IBS (men, n=58)	P Value	Normal (women, n=214)	IBS (women, n=138)	P Value
Age	51.01±16.54	39.38±13.84	<0.001	47.27±15.04	40.58±13.67	<0.001
Height	164.56±8.41	165.55±7.12	0.42	163.68±7.22	162.57±6.24	0.14
Weight	64.08±12.41	61.96±10.81	0.25	62.19±12.19	60.45±12.25	0.19
OABSS	2.56±2.69	1.57±2.43	0.01	2.40±2.87	1.76±2.52	0.03
OABSS Q3	0.92±1.26	0.66±1.13	0.17	0.83±1.25	0.70±1.18	0.32
IPSS Q1	1.14±1.39	1.14±1.42	0.98	1.02±1.41	0.82±1.41	0.20
IPSS Q2	1.29±1.24	1.21±1.23	0.67	1.37±1.56	0.92±1.21	<0.001
IPSS Q3	1.09±1.44	0.86±1.20	0.26	0.98±1.56	0.64±1.16	0.03
IPSS Q4	0.93±1.35	0.52±0.85	0.03	0.98±1.43	0.70±1.24	0.06
IPSS Q5	1.44±1.66	0.95±1.41	0.04	1.03±1.62	0.69±1.31	0.04
IPSS Q6	0.61±1.49	0.68±1.16	0.07	0.76±1.40	0.82±1.04	0.01
IPSS Q7	1.08±1.12	0.86±1.12	0.18	1.22±1.33	0.82±1.04	<0.001
IPSS Voiding	4.72±5.24	3.64±4.61	0.17	3.77±5.10	2.49±4.00	0.01
IPSS Storage	3.32±2.98	2.57±2.78	0.09	3.61±3.65	2.43±3.08	<0.001
IPSS Total	8.40±7.86	6.68±6.85	0.14	8.04±5.54	5.14±6.54	<0.001
QoL	2.07±1.71	1.70±1.26	0.13	1.71±1.71	1.38±1.35	0.05
SDS	38.32±10.28	44.32±12.94	<0.001	40.03±10.62	45.23±13.23	<0.001

\*OABSS: Overactive bladder symptom score, Q3: Question number 3, IPSS: International Prostate Symptom Score, QoL: Quality of Life, SDS: Zung Self-Rating Depression Scale