

## The influence of masculinity/femininity on the occurrence of PI-IBS analyzed with risk factors

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**Background/Aims:** Post infectious Irritable bowel syndrome (PI-IBS) due to gastroenteritis occurs in about 4-32% worldwide. The occurrence of PI-IBS is more common in women, and it remains unclear whether this is an ovarian hormonal or psychological effect. In our study, the influence of masculinity/femininity on the occurrence of PI-IBS was analyzed along with traditional risk factors.

**Methods:** From 2018 to 2020, patients diagnosed with gastroenteritis who were hospitalized and treated with antibiotics were enrolled. Patients were classified through the Korean Sex Role Inventory-Short Form (KSRI-SF) based on Bern's theory of androgyny. After six months, the presence or absence of PI-IBS was confirmed through a telephone questionnaire, and 215 patients were finally enrolled. Influencing factors were analyzed by logistic regression test.

**Results:** The mean age of the patient group was  $43.68 \pm 15.99$ , and 62% were female. During hospitalization, the duration of fever was  $0.81 \pm 0.732$  days, the number of diarrhea was  $7.11 \pm 6.12$ , and CRP was  $10.68 \pm 6.18$  mg/dL. The number of androgyny / masculinity / feminity / aschematics types classified by KSRI-SF was 61 (28.4%) / 49 (22.8%) / 50 (23.3%) / 55 (25.6%), respectively. After 6 months, PI-IBS occurred in 34 patients (15.8%). Multivariate analysis revealed an association between PI-IBS and Female (OR=7.483(2.141-26.149),  $p=0.002$ ), KSRI-SF aschematics type (OR=3.134(1.025-9.578),  $p=0.045$ ), Young age (OR=0.958(0.924-0.993),  $p=0.019$ ) and high CRP (OR = 1.127 (1.035-1.227),  $p=0.006$ ). There was no association between PI-IBS and antibiotic type, antibiotic treatment duration, and frequency of diarrhea.

**Conclusions:** In our study, associations between PI-IBS and Female, KSRI-SF aschematics type, young age, and high CRP were observed.

### Baseline characteristics

Patients characteristics				N = 215	%
Age				$43.68 \pm 16.04$	
Gender	Male	82	38.1		
	Female	133	61.9		
BMI (Kg/M <sup>2</sup> )	<23.0	55	25.6		
	23.0-25.0	101	47.0		
	>25.0	59	27.4		
Underlying disease	DM	32	14.9		
	HTN	12	5.6		
Smoking	Present	32	14.9		
	Never	183	85.1		
Alcohol	Present	73	34.0		
	Never	142	66.0		

  

Patients characteristics				N = 215	%
Fever				$0.81 \pm 0.732$ days	
Peak diarrhea number				$7.11 \pm 6.122$	
Peak CRP				$10.69 \pm 6.18$	
Antibiotics duration				$10.77 \pm 1.795$ days	
KSRI-SF	Androgyny	61	28.4		
	Masculinity	49	22.8		
	Feminity	50	23.3		
	Aschematics	55	25.6		

  

Factors				
	Univariate(95% CI)	P	Multivariate	P
Age	0.982(0.957-1.006)	0.01	0.958(0.924-0.993)	0.019
Sex	1.585(0.716-3.512)	0.026	7.469(2.171-25.697)	0.01
BMI (Kg/M <sup>2</sup> )	1.06(0.998-1.128)	0.059		
Smoking	1.277(0.482-3.386)	0.622		
Alcohol	1.447(0.683-3.065)	0.334		
KSRI-SF	Androgyny	1.0 (Reference)		
	Masculinity	1.127(0.400-3.179)	0.821	
	Feminity	0.369(0.094-1.444)	0.152	
	Aschematics	2.365(1.378-4.059)	0.02	3.133(1.025-9.576) 0.045
Antibiotics duration	1.253(1.030-1.523)	0.024		
Peak CRP	1.082(1.019-1.148)	0.01	1.127(1.035-1.226)	0.006