

PSYCHOLOGICAL DISTRESS AND PERSONALITY TRAIT IN FEMALE OVERACTIVE BLADDER PATIENTS: A CASE-CONTROL STUDY

Hypothesis / aims of study

The primary aim of this study was to explore the distribution of psychological symptoms in female overactive bladder (OAB) patients. The secondary purpose is to investigate the association between psychological distress, personality trait, severity of OAB, and treatment response to anti-muscarinic drug.

Study design, materials and methods

Eighty-one female OAB patients and 71 non-OAB women were consecutively recruited at the outpatient clinic of Obstetrics and Gynecology of a tertiary medical center between August 2008 and February 2010. The enrolled patients were treated with tolterodine 4 mg SR before March 2009, and were treated solifenacin 5 mg after March 2009 once a day for 12 weeks. The severity of OAB was assessed by structured inventory of OABSS, UDI-6 & IIQ-7. The psychological symptoms were measured by using the Brief Symptom Rating Scale (BSRS). Personality trait was evaluated using the Maudsley Personality Inventory (MPI). Family functioning was measured by using the Family APGAR score. The above parameters were compared between OAB and non-OAB subjects, and also before and after treatments.

Results

There were 77 OAB patients completed the pre- and post-treatment psychosomatic evaluation and 57 (74%) of them were defined to have treatment response to anti-muscarinic drug. Thirty-four patients received tolterodine treatment and forty-three received solifenacin. Compared with health control, the OAB patients had significantly higher score of neuroticism ($p < 0.01$) and lower score of extroversion ($p = 0.01$) in MPI (Table 1). Symptom scores of anxiety ($p = 0.01$), general severity index ($p = 0.01$), paranoid tendency ($p = 0.03$), and somatic complaints ($p = 0.04$) were also higher among OAB patients (Table 1). Pre-treatment severity of OAB did not correlate with the psychological measurements. All of the pre-treatment scores in psychological assessments did not predict the treatment response (Table 2). However, those who responded to anti-muscarinic drug therapy had significant lower post-treatment psychological symptoms (Table 3).

Interpretation of results

The patients of OAB were characterized to have introverted and neuroticism-proneness personality trait. They suffered from prominent psychological distress but the pre-treatment psychological symptoms and personality trait did not correlate with disease severity and treatment response. Post-treatment psychological symptoms which differed significantly between responder and non-responder may indicate their own secondary nature to the suffering of OAB

Concluding message

In addition to physical discomfort, patients of OAB suffered from significant psychological distress. The mechanism of classical psychosomatic disorders might play a role in the pathogenesis of OAB. Further study is warranted to explore the mechanism that links irritable bladder and mind.

Table 1. Mann-Whitney U tests on pre-treatment psychometric assessments by case/control

Variables	Case/Control		Asymp. Sig. (2-tailed)
	Control (N = 71)	Case (N = 77)	
Psychosomatic symptoms (BSRS)			
SOM	67.15	81.28	0.04
OBS	68.41	80.12	0.09
SEN	76.04	73.08	0.63
DEP	69.56	79.05	0.15
ANX	64.83	83.42	0.01
HOS	68.35	80.17	0.06
PHO	68.48	80.05	0.07
PAR	67.96	80.53	0.03
ADD	68.36	80.16	0.08
GSI	64.69	83.55	0.01
Personality trait (MPI)			
L	70.27	78.40	0.24
N	62.73	85.36	< 0.01
E	84.46	65.32	0.01
Family support			
APGAR	76.56	72.60	0.57

SOM = somatic complaints; OBS = obsessive-compulsive symptoms; SEN = interpersonal sensitivity; DEP = depressive symptoms; ANX = anxiety symptoms; HOS = hostility; PHO = phobic-anxiety; PAR = paranoid tendency; ADD = additional symptoms; GSI = general severity index; L = social desirability; N = neuroticism; E = extroversion; APGAR = adaptability, partnership, growth, affection, and resolve.

Table 2. Mann-Whitney U tests on pre-treatment psychometric assessments by treatment response

Pre-treatment	Mean Rank		Asymp. Sig. (2-tailed)
	Responder (N = 57)	Non-responder (N = 20)	
Psychosomatic symptoms			
SOM	41.46	31.98	0.10
OBS	39.01	38.98	1.00
SEN	40.06	35.98	0.42
DEP	39.99	36.18	0.49
ANX	37.22	44.08	0.23
HOS	39.10	38.73	0.94
PHO	37.61	42.98	0.32
PAR	39.57	37.38	0.66
ADD	40.19	35.60	0.42
GSI	39.73	36.93	0.63
Personality trait			
L	37.90	42.13	0.46
N	37.67	42.80	0.38
E	37.78	42.48	0.42
Family support			
APGAR	39.04	38.88	0.98

*Abbreviation as Table 1.

Table 3. Mann-Whitney U tests on post-treatment psychosomatic symptoms by treatment response

Variables	Treatment response		Asymp. Sig. (2-tailed)
	Mean Rank		
	Responder (N = 57)	Non-responder (N = 20)	
SOM	36.01	47.53	0.04
OBS	36.70	45.55	0.12
SEN	37.22	44.08	0.14
DEP	36.50	46.13	0.08
ANX	35.46	49.10	0.01
HOS	36.18	47.05	0.03
PHO	34.68	51.30	< 0.01
PAR	36.46	46.23	0.03
ADD	38.98	39.05	0.99
GSI	35.66	48.53	0.03

*Abbreviation as Table 1.

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?	Yes
Specify Name of Ethics Committee	National Taiwan University Hospital Research Ethics Committee
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	Yes