

## Association of Irritable Bowel Syndrome with Somatization

ALI HYDER MUGHERI<sup>1</sup>, SHABANA LAKHO<sup>2</sup>, AMJAD HUSSAIN BALOUCH<sup>3</sup>, FOZIA UNAR<sup>4</sup>, HINA NAZ BOZDAR<sup>5</sup>, KHUSHBO JAWED SAMO<sup>6</sup>

<sup>1</sup>Associate Professor, <sup>2</sup>Assistant Professor, Department of Gastroenterology, Chandka Medical College @ Shaheed Mohtarma Benazir Bhutto Medical University, Larkana

<sup>3</sup>Assistant Professor & Head of Psychiatry Department, Pir Abdul Qadir Shah Jeelani Institute of Medical Sciences, Gambat

<sup>4</sup>Assistant Professor, Department of Obstetrics & Gynaecology, Khairpur Medical College, Khairpur Mir's

<sup>5</sup>PG Student, Department of Obstetrics & Gynaecology, PUMHS Nawabshah

<sup>6</sup>PG Student, Department of Obstetrics & Gynaecology, Isra University Hyderabad

Correspondence to: Dr. Shabana Lakho Cell: 0332-2771304

### ABSTRACT

**Objective:** To evaluate the association of irritable bowel syndrome with somatization.

**Study Design:** Prospective study

**Place and Duration of Study:** Department of Gastroenterology, Chandka Medical College @ Shaheed Mohtarma Benazir Bhutto Medical University, Larkana from 1<sup>st</sup> May 2021 to 31<sup>st</sup> October 2021.

**Methodology:** Fifty patients suffering from somatization were registered from the hospital based setting. Symptoms checklist 90 revised as SCL-90 revised psychopathological symptoms measuring tool was applied for measuring somatization. Gastrointestinal Symptoms-Rating Scale (GSRS) was also applied which used seven level Likert scale based on frequency, intensity of GI symptoms within last 7 days. Demographic information, clinical co morbidity associations, family history was also recorded.

**Results:** Irritable bowel syndrome presented in only 14% males while it was seen in 34% females. High scored somatization was more common in females. The statistical analysis showed that there was a significant difference in the severe abdominal pain between low and high somatization cases with IBS. A high scoring of indigestion and diarrhea was also noticed in the high somatization cases of IBS. High level of somatization (58% cases) was observed within the irritable bowel syndrome cases.

**Conclusion:** Somatization exacerbates the symptom profile of irritable bowel syndrome patients that need to be timely and properly assessed.

**Key words:** Somatization; Symptomology; Worsen, Disease management

### INTRODUCTION

Somatization is a condition where a person significantly focuses on the physical pain weakness symptoms to a level of distress causing serious health functional stress. Whereas the irritable bowel syndrome (IBS) is a condition accompanied by group of symptoms including repetition abdominal pain, alterations in bowel movement and overall discomfort. The known causes of IBS have not been known however a variety of management techniques are available for reducing its symptoms.<sup>1,2</sup>

Global data suggests that almost half of the IBS cases are reported to be suffering from somatization. These IBS patients greatly suffers from anxiety, depression and a sequence of disorder also known as somatoform-disorders as well a functional-somatic syndrome.<sup>3,4</sup> The comorbidities related with IBS have been reported in various literature.<sup>5,6</sup> In conditions where somatization has been studied as causing IBS in patients it has been observed that brain alters its regional activation method with presenting high pain perception, a deregulated immune as well as neuroendocrine functioning and genetic predisposition.<sup>7-10</sup>

This study was designed to understand the association of IBS with somatization in this part of the world where IBS is already misunderstood. The results of this study will help in better understanding of these conditions and for improved management of IBS as well as somatization and their interrelationship.

### MATERIALS AND METHODS

This prospective study was conducted at Department of Gastroenterology, Chandka Medical College @ Shaheed Mohtarma Benazir Bhutto Medical University, Larkana from 1<sup>st</sup> May 2021 to 31<sup>st</sup> October 2021. Fifty patients suffering from somatization were registered from the hospital based setting. Symptoms checklist 90 revised as SCL-90 revised psychopathological symptoms measuring tool was applied for measuring somatization. Nine primary symptoms are targeted in it and three global-indices are observed. The patients were included after their clinical assessment and blood, stool testing which defined them as IBS and differentiated them from other diseases as IBD, celiac or H-pylori infections. Each patient was given a written informed consent of participation in this study. The study

was also preliminary approved from review board. In addition to this global severity index for recent intensity of somatization was also adapted. Scoring was further transformed into T scoring which with a value as >60 was considered as significant. Irritable bowel syndrome was termed through IBS scoring-system usage where a well-structured questionnaire was used for collecting data through authentic GI related questions. Another scoring system known as Gastrointestinal Symptoms-Rating Scale (GSRS) was also applied which used seven level Likert scale based on frequency, intensity of GI symptoms within last 7 days. All symptoms were merged together to formulate four categories as abdominal pain, dyspepsia, indigestion and diarrhea syndrome. These included dissatisfactions related with the bowel habits, clinical symptoms and inferences of IBS in daily life routine. A scoring if 0-500 was used in this context with a cut off of less than 175 as mild while 175-300 as moderate and greater than 300 as severe. Demographic information, clinical co morbidity associations, family history was also recorded. Patients with somatization only were included in the study while those with other psychotic disorders or mental condition were excluded from the study. Data was analyzed with SPSS 25 using Mann-Whitney test rank sum test keeping p value <0.05 as significant.

### RESULTS

The mean age of the patients was 39.35±13.3 with the age between 18-50 years. The patients with IBS were 48% among total cases of somatization with IBS presented in only 14% males while it was seen in 34% females. High scored somatization was more common in females (Table 1). The statistical analysis showed that there was a significant difference in the severe abdominal pain between low and high somatization cases with IBS. The cutoff for somatization was taken as 63. There was an insignificant variance between duration abdominal pain, bowel satisfaction or disturbance in life within both scoring grades (Table 2).

The DSRS scoring shows a significant high somatization variance in cases of IBS with severe abdominal pain than low somatization. A high scoring of indigestion and diarrhea was also noticed in the high somatization cases of IBS (Table 3).

Within the IBS cases high level somatization was observed in almost 58% cases while the other condition as hostility and interpersonal sensitivity were also presented as common (Fig. 1).

Table 1: Frequency of age and gender of IBS in somatization cases

Variable	Males	Females
Age (years)	46.4±12.5	32.3±14.1
IBS with low Somatization	3 (37.5%)	5 (62.5%)
IBS with high Somatization	4 (33.3%)	12 (75%)
Total	7 (14%)	17 (34%)

Table 2: Comparison of abdominal pain between low and high somatization

IBS	Low somatization <63 (n=20)	High somatization ≥63 (n=30)	P value
Severe abdominal pain	37.85±22.5	54.1±22.78	0.03
Duration of abdominal pain in days	33.16±21.9	51.2±28.7	0.55
Bowel-satisfaction	69.1±19.9	64.5±23.3	0.74
Disturbed life	59.8±19.7	56.8±23.2	0.84
Overall score	199.91±84	687.4±97.98	0.17

Table 3: DSRS scoring for analyzing IBS levels in somatization

Syndromes	Low somatization <63 (n=20)	High somatization ≥63 (n=30)	P value
Severe abdominal pain	5 (3-8)	7(4-9.1)	0.004
Dyspepsia	6(3-9.8)	6(3.3-9.7)	0.86
Indigestion	10(4-12.1)	10.21(8-9.6)	0.04
Diarrhea	6(4-8.9)	7(5-9.6)	0.39
Overall score	27(14-38.8)	30(20.3-38)	0.02

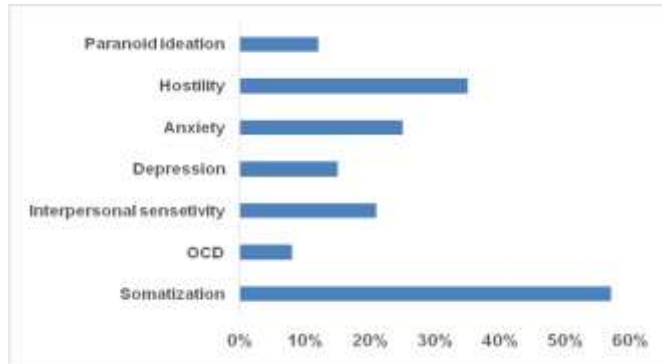


Fig. 1: Presentation of high somatization and psychological disturbances in IBS cases

**DISCUSSION**

Irritable bowel syndrome is characterized as gastrointestinal (GI) tract with subsequent symptoms including abdominal discomfort, diarrhea and intestinal alterations. Its estimated prevalence is approximately 10-20%. Present study confirms the psychological disorders' confirmation and impaired intestinal function and integrity. GI symptoms appeared to be significantly associated with disease severity. Inflammation in small intestine was also related with altered intestinal permeability.<sup>11,12</sup>

Apart from gastrointestinal symptomatology, IBS patients also suffered from severe depression, disturbed social life and anxiety. Studies confirmed that, all these symptoms were positively linked with IBS, and considered as somatic disorder. This problem needs to be addressed to find the linkage of psychological disorders with IBS. Overall, present findings are in accordance with the already published data.<sup>13,14</sup> Soncini et al<sup>15</sup> proposed the importance of psychological involvement and its impact on well-being of IBS patient. It further exacerbates the symptoms severity.

Guts intensification due to somatization, global data postulated that, increased level of somatization further aggravates the symptoms profile of the patients particularly; abdominal discomfort, bloating and distension in contrast to patients without somatization.<sup>16,17</sup> These findings highlight that, disease management and psychological evaluation of these patients should be routinely addressed to obtain effective therapeutic framework and adequate diagnostic method.<sup>18,19</sup>

**CONCLUSION**

Somatization adversely impact on irritable bowel syndrome. Significant association between somatization and irritable bowel syndrome was found in this study.

**REFERENCES**

- Mearin F, Lacy BE, Chang L, et al. Bowel disorders. *Gastroenterology* 2016;150:1393-407.
- Lydiard RB, Falsetti SA. Experience with anxiety and depression treatment studies: implications for designing irritable bowel syndrome clinical trials. *Am J Med* 1999;107:65S-73.
- Johannes P, Fournier C, Durdevic M, et al. A microbial signature of psychological distress in irritable bowel syndrome. *Psychosom Med* 2018;80:698-709.
- Barsky AJ, Borus JF. Functional somatic syndromes. *Ann Intern Med* 1999;130:910-21.
- Clouse RE, Lustman PJ. Use of psychopharmacological agents for functional gastrointestinal disorders. *Gut* 2005;54:1332-41.
- Lipowski ZJ. Somatization: the concept and its clinical application. *Am J Psychiatry* 1988; 145: 1358-68.
- Williams AE, Czyzewski DI, Self MM, Shulman RJ. Are child anxiety and somatization associated with pain in pain-related functional gastrointestinal disorders? *J Health Psychol* 2015; 20:369-79.
- Hausteiner-Wiehle C, Henningsen P. Irritable bowel syndrome: relations with functional, mental, and somatoform disorders. *World J Gastroenterol* 2014;20:6024-30.
- Heinrich TW. Medically unexplained symptoms and the concept of somatization. *WMJ* 2004; 103:83-7.
- Ketterer MW, Buckholtz CD. Somatization disorder. *J Am Osteopath Assoc.* 1989; 89(489-90):495-9.
- Hausteiner-Wiehle C, Henningsen P. Irritable bowel syndrome: relations with functional, mental, and somatoform disorders. *World J Gastroenterol* 2014; 20: 6024-30.
- Patel P, Bercik P, Morgan DG, Bolino C, Pintos-Sanchez MI, Moayyedi P, et al. Irritable bowel syndrome is significantly associated with somatization in 840 patients, which may drive bloating. *Alimentary Pharmacol Therapeutics* 2015;41(5):449-58.
- Hildenbrand AK, Nicholls EG, Aggarwall R, Brody-Bizar E, Daly BP. Symptom Checklist-90-Revised (SCL-90-R). In: Cautin RL, Lilienfeld SO, editors. *The encyclopedia of clinical psychology*. 1<sup>st</sup> ed. Chichester: Wiley, 2015; 1-5.
- Jensen HH, Mortensen EL, Lotz M. Scl-90-R symptom profiles and outcome of short-term psychodynamic group therapy. *ISRN Psychiatry* 2013;2013:540134.
- Soncini M, Stasi C, Usai-Satta P, Milazzo G, Bianco M, Leandro G, et al. IBS clinical management in Italy: the AIGO survey. *Dig Liver Dis* 2019;51:782-9.
- Arsiè E, Coletta M, Cesana BM, Basilisco G. Symptom-association probability between meal ingestion and abdominal pain in patients with irritable bowel syndrome: does somatization play a role? *Neurogastroenterol Motil* 2015;27:416-22.
- Jones MP, Maganti K. Symptoms, gastric function, and psychosocial factors in functional dyspepsia. *J Clin Gastroenterol* 2004;38:866-72.
- Padhy SK, Sahoo S, Mahajan S, Sinha SK. Irritable bowel syndrome: is it "irritable brain" or "irritable bowel"? *J Neurosci Rural Pract* 2015;6:568-77.
- Prospero L, Riezzo G, Linsalata M, Orlando A, D'Attoma B, Di Masi M, et al. Somatization in patients with predominant diarrhoea irritable bowel syndrome: the role of the intestinal barrier function and integrity. *BMC Gastroenterol* 2021;21(1):1-0.