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Research Article

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Psychiatric Disorders in Patients with Irritable Bowel Syndrome at a Tertiary Care Centre in Bangladesh

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Abstract

Background/Aims: *Irritable bowel syndrome (IBS) is one of the common functional gastrointestinal disorder. Psychosomatic illness is a common association with IBS. Although studies in both western and Asian countries showed significant coexisting psychiatric illness in IBS patients, such studies are scarce in south-east Asian countries like Bangladesh. So, the aim of this study was to find out the association of psychiatric co-morbidities in patients with IBS in a tertiary care center.*

Methods: *This was a cross-sectional study conducted from July 2017 to January 2019. Patients were selected from the dedicated IBS clinic of a tertiary care center in Bangladesh. IBS population were enrolled according to the Rome-IV diagnostic criteria. Relevant history, physical examination and investigations were done to exclude organic diseases. A psychiatric assessment of all the study subjects was done by a clinical psychiatrist using the General Health Questionnaire (GHQ)-12.*

Results: *Ninety-six IBS patients were enrolled in this study. The mean age was 33.51±9.87 years. Male outnumbered female (85.4% vs 14.6%). IBS diarrhea (83.3%) was predominant in this study. Approximately 60.41% of IBS patients had different psychiatric illnesses. Major depressive disorder (27.1%) and generalized anxiety disorder (15.6%) were the most common psychiatric illness in this study. There was no significant difference in psychiatric comorbidities among various IBS types.*

Conclusions: *A significant number of IBS patients have co-morbid psychiatric disorders. So, IBS patients should meticulously be screened for such co-morbidities for effective and integrated management.*

Keywords: Irritable Bowel Syndrome (Ibs); Psychiatric Disorder; General Health Questionnaire (Ghq)-12; Major Depressive Disorder (Mdd); Generalized Anxiety Disorder (Gad)

Introduction

Irritable bowel syndrome (IBS) is a functional gastrointestinal disorder manifested by abdominal pain, abdominal fullness and irregular bowel habit (sometimes diarrhea, sometimes constipation or both diarrhea and constipation) without any organic pathology [1]. It accounts for 40-70% of consultations to gastroenterologists [2-4]. The exact cause of IBS is unknown. Post-infectious inflammation, altered gut motility, psychiatric illness, stressful life events and alteration in the gut-brain axis play important roles in its development [5]. Psychiatric co-morbidity is present in 50-90% of IBS patients [6]. So alleviation of symptoms of IBS can be achieved by reducing the severity of psychological distress [7-9]. Different methods of psychological interventions have been tested in clinical trials and many of them are widely accepted in the management of irritable bowel syndrome. As psychiatric disorders adversely influence the outcome of IBS and there is a close relationship between psychological symptoms and severity of IBS, an accurate and early diagnosis of associated psychological disorders may be an important aspect of its successful management. IBS is a chronic disease with fluctuating symptoms and the patients frequently visit several physicians, perform various unnecessary costly investigations that reveal no abnormalities; ultimately heightens their anxiety, frustration and financial loss. Most of the studies regarding

IBS and associated psychiatric illness were conducted in western countries. Since socio-cultural differences influence the expression of these psychiatric disorders, the results of western studies may not be consistent with the studies of this region. A few studies are available in the Indian subcontinent related to this topic. The aim this study was to improve the knowledge about the association of psychiatric disorders with IBS in this region for integrated management of these common disorders.

Methods

It was an observational cross-sectional study conducted in the IBS clinic of a tertiary care hospital in Bangladesh from July 2017 to January 2019 [10]. A total number of 96 patients aged 18 years and older were enrolled in this study using Rome-IV diagnostic criteria for IBS. The study subjects were undergone necessary investigations including full blood count, ESR, stool for routine microscopic examination & culture, thyroid function test, serum trans-tissue glutaminase (tTG). Full colonoscopy, upper GI endoscopy, and abdominal ultrasonography was done inselected patients. Patients having fever, nocturnal diarrhea, rectal bleeding, anemia and significant weight loss were excluded from this study. Psychiatric assessment was done by a specialist psychiatrist using the General Health Questionnaire (GHQ)-12. The GHQ-12 has 12 items that are useful in busy clinical settings [11-13]. It was adopted as a screening tool in an international World Health Organization (WHO) study of psychological disorders in primary health care, as it has been considered the best validated among similar screening tools. Continuous variables were expressed as mean and standard deviation. Categorical variables were expressed as frequency and percentages.

IRB Approval

We conducted this study in compliance with the principles of the Declaration of Helsinki. The study's protocol was reviewed and approved by the Institutional Review Board of the University (IRB No. 134, Date: 09.12.2017). Written informed consent was obtained.

Results

A total of 96 IBS patients were included in this study, among them 82 (85.4%) were males and 14 (14.6%) were females. The majority of this study population, 74 (77%) belonged to the age group 21-40 years. The mean age was 33.51±9.87 years. Among the IBS subtypes, 80 (83.3%) were diarrhea-predominant (IBS-D), 6 (6.3%) were constipation-predominant (IBS-C) and 10 (10.4%) were mixed variety IBS (IBS-M) (Table 1). A total of 96 patients were assessed by clinical psychiatrists. Fifty-eight (60.41%) out of 96 patients had one or more psychiatric disorders. The main psychiatric diagnoses were major depressive disorder (MDD) 26 (27.1%), generalized anxiety disorder (GAD), 15 (15.6%), somatic symptom disorder 5 (5.2%), sexual dysfunctions 3 (3.1%), obsessive-compulsive disorder 2 (2.1%) and hypochondriasis 2 (2.1%) etc. Thirty-eight (39.6%) of a total of 96 IBS patients had no psychiatric disease (Table 2). There was no significant difference in psychiatric comorbidities among various IBS types (Table 3).

Table 1: Demographic Characteristics of study population (N=96)

Characteristic	Psychiatric diagnosis		Total (n=96)	P-value
	No (n=38)	Yes (n=58)		
Age (Mean ± SD)	34.32 (± 10.4)	32.98 (± 9.6)	33.51 (± 9.9)	0.521
Gender				
Male	34 (89.5)	48 (82.8)	82 (85.4)	0.555
Female	4 (10.5)	10 (17.2)	14 (14.6)	
Marital status				
Married	26 (68.4)	36 (62.1)	62 (64.6)	0.624
Unmarried	12 (31.6)	21 (36.2)	33 (34.4)	
Widow	0 (0.0)	1 (1.7)	1 (1.0)	
Occupation				
Service	14 (36.8)	17 (29.3)	31 (32.3)	0.709
Business	2 (5.3)	8 (13.8)	10 (10.4)	
Worker/Cultivator	2 (5.3)	4 (6.9)	6 (6.3)	
Housemaker	2 (5.3)	5 (8.6)	7 (7.3)	
Student	9 (23.7)	10 (17.2)	19 (19.8)	
Others	9 (23.7)	14 (24.1)	23 (24.0)	
BMI (Mean ± SD)	22.29 (± 3.9)	21.74 (± 4.3)	21.96 (± 4.1)	0.526
Level of education				
Primary	8 (21.1)	21 (36.2)	29 (30.2)	
Secondary	7 (18.4)	11 (19.0)	18 (18.8)	

Higher secondary	7 (18.4)	12 (20.7)	19 (19.8)	0.243
Graduate and above	16 (42.1)	14 (24.1)	30 (31.3)	
Monthly family income				
< 120$	17 (44.7)	27 (46.6)	44 (45.8)	0.984
120 – 350$	15 (39.5)	22 (37.9)	37 (38.5)	
> 350$	6 (15.8)	9 (15.5)	15 (15.6)	
IBS type				
IBS-Diarrhea	31 (81.6)	49 (84.5)	80 (83.3)	0.750
IBS-Constipation	2 (5.3)	4 (6.9)	6 (6.3)	
IBS-Mixed	5 (13.2)	5 (8.6)	10 (10.4)	

Table 2. Major psychiatric diagnosis in IBS patients (N=96)

Psychiatric Diagnosis	Frequency	Percentage (%)
Major Depressive Disorder	26	27.1
Generalized Anxiety Disorder	15	15.6
Somatic Symptom Disorder	5	5.2
Obsessive Compulsive Disorder	2	2.1
Social phobia	1	1.0
Dysthymia	1	1.0
Hypochondriasis	2	2.1
Sexual dysfunctions	3	3.1
Others	3	3.1
No psychiatric disorder	38	39.6

Values are presented as frequency and percentage.

Table 3. Relation between psychiatric disorders and various types of IBS (N=96)

Psychiatric diagnosis	IBS Type			Total n (%)	P-value
	IBS-M n (%)	IBS-D n (%)	IBS-C n (%)		
Major Depressive Disorder	3 (30.0)	21 (26.3)	2 (33.3)	26 (27.1)	0.930
Generalized Anxiety Disorder	1 (10.0)	13 (16.3)	1 (16.7)	15 (15.6)	0.874
Somatic Symptom Disorder	1 (10.0)	4 (5.0)	0 (0.0)	5 (5.2)	0.670
Obsessive Compulsive Disorder	0 (0.0)	2 (2.5)	0 (0.0)	2 (2.1)	0.815
Social phobia	0 (0.0)	1 (1.3)	0 (0.0)	1 (1.0)	0.904
Dysthymia	0 (0.0)	1 (1.3)	0 (0.0)	1 (1.0)	0.904
Hypochondriasis	0 (0.0)	1 (1.3)	1 (16.7)	2 (2.1)	0.034
Sexual dysfunctions	0 (0.0)	3 (3.8)	0 (0.0)	3 (3.1)	0.734
Others	0 (0.0)	3 (3.8)	0 (0.0)	3 (3.1)	0.734

Values are presented as number (%). IBS, Irritable bowel syndrome; IBS-C, Irritable bowel syndrome – Constipation; IBS-D, Irritable bowel syndrome – Diarrhoea; IBS-M, Irritable bowel syndrome – Mixed.

Discussion

Irritable bowel syndrome is a psycho-physiologic disorder [5]. About 50-90% of IBS patients have some forms of psychiatric co-morbidities [14]. Patients with symptoms of IBS who consult a physician have a higher percentage of psychological symptoms than patients who do not seek medical care [15]. The chronic course and recurrent nature of IBS may create more psychiatric symptoms resulting in frequent medical consultations and increased health care costs. Males outnumbered females in our study which showed that 85.4% were males and 14.6% were females which are quite similar to the results seen in other studies [16]. In a study in Bangladesh conducted by Alim et al. showed male predominance among psychiatric patients in IBS (male 87.2% vs 12.8%female) [17-19]. Studies from two Asian countries India and Pakistan also showed that IBS is more frequent among male patients. This may be due to the fact that healthcare seekers among IBS patients were predominantly males than females (56% versus 44%).18 Moreover male patients consulting doctors more often than females due to various sociocultural reasons here.

The most frequent subtype of IBS in our study was IBS-D followed by IBS-M, and IBS-C [16]. These findings are in accordance with the results of a study conducted by Alim and colleagues in a tertiary level hospital in Bangladesh who found similar results [20]. IBS types are mostly depends on study population and regional difference [21, 22]. In our study, psychiatric disorders were seen in about 60.41% of IBS patients. This was similar to the the western studies where the psychiatric disorders ranges from 40.0% - 60.0% [23]. In a case-control study at a tertiary care hospital in Jammu and Kashmir, India showed inconsistent results to our study where the prevalence of psychiatric co-morbidities among IBS patients was quite high, 84.4%. Among 60.41% of IBS patients who had coexisting psychiatric diseases, the majority had MDD (27.1%), GAD (15.6%), Somatic symptom disorder (5.2%), Sexual dysfunctions (3.1%), Obsessive-compulsive disorder (2.1%), Hypochondriasis (2.1%) whereas social phobia, Dysthymia, and other non-specific psychiatric diseases together constitute about 5.2% of study patients. Thirty-eight (39.6%) of a total of 96 IBS patients had no psychiatric disease. Major depressive disorder and Generalized anxiety disorder were more prevalent in our IBS patients which was also seen in other studies. Kawoos et al [24]. conducted a study in a tertiary care hospital in Jammu and Kashmir, India which showed Generalized anxiety disorder and Major depressive illness to be the most prevalent psychiatric diseases among IBS patients, 30% and 27.5% respectively. In a study done by Mayer et al. 32.0% of patients of IBS presented with GAD symptoms [25]. A study in Hong Kong showed, the prevalence of GAD was higher in IBS patients compared to non-IBS patients, and IBS patient had 6-fold increase chance of developing GAD [26]. According to a study done by Kabra and Nadkarni in India, the prevalence of depression and GAD in IBS patients were about 37% and 31.0% respectively which are higher than our study. The probable reason being different scales were used to assess depression in the two studies.

Conclusion

IBS is one of the most common functional gastrointestinal disorders associated with high levels of psychiatric illness in comparison to the general population. All IBS patients should be properly scrutinized for psychiatric disorders to provide an integrated management of these patients. So, proper treatment of associated psychiatric illness is essential for management of IBS patients. We emphasize screening of all IBS patients for psychiatric comorbidities and timely referral to a psychiatrist.

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