Original article

Psychiatric morbidity among patients with irritable bowel syndrome

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Summary

Irritable Bowel Syndrome (IBS) is a functional disorder characterized by a set of gastrointestinal symptoms often associated with extra-digestive symptoms with unknown organic basis. It is a prototypic functional bowel disorder in terms of its heterogeneous nature with multifactor pathogenesis. Invariably it is co-morbid with psychiatric disorders. This study was done to determine the frequency and types of psychiatric disorders with irritable bowel syndrome and to find out association of socio-demographic and relevant variables. It was cross-sectional study carried out in the Department of Gastroenterology, Bangabandhu Sheikh Mujib Medical University (BSMMU) from January 2014 to December 2014. Total 250 sample were included by convenient sampling technique in this study diagnosed as IBS. Diagnosis was done according to Rome III criteria and SCID-CV was used for psychiatric assessment. Respondents were above 18 years of age of either sex. Data was analyzed using SPSS 20. Results showed 86.4% patients have psychiatric disorders. The most common disorder was generalized anxiety disorder (44.9%) followed by major depressive disorder (37.5%). Maximum (35.2%) were IBS-D type followed by 32.8% IBS-C type and 32% IBS-M type. So, it is seen that significant proportion of psychiatric disorders was found in patients with irritable bowel syndrome. Among them, generalized anxiety disorder was leading psychiatric disorder.

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Introduction

Irritable Bowel Syndrome (IBS) is a functional disorder characterized by a set of gastrointestinal symptoms often associated with extra-digestive symptoms with unknown organic basis. It is a prototypic functional bowel disorder in terms of its heterogeneous nature with multifactor pathogenesis. Estimated prevalence for the general population is 8% to 17%, while only half of these asked for medical attention, as a result of some psychological factors that may play an important role in determining health care-seeking behaviour.[1] Patients with IBS having some symptoms that clearly suggest gastrointestinal distress (pain, distention, flatulance and urgency) but they also show features of autonomic arousal that are common in mood and anxiety disosrders such as weakness, fatigue, palpitations, nervousness, dizziness, headache, hand tremor, back pain, sleep disturbance.[2,3] Several clinical studies and reports from different researchers have shown that, among patients seeking medical attention for IBS, 70-90% may have psychiatric co-morbidity, most commonly mood disorders, anxiety disorders and somatization disorder.[4,5] The published literature indicates that fewer than half of individuals with IBS seek treatment for it, of those who do, 50% to 90% have psychiatric disorders, including panic disorder, generalized anxiety disorder, social phobia, post-traumatic stress disorder and major depression.[6] Various studies in India have shown that as many as 30-40% of patient with IBS have co-morbid depression or anxiety disorder.[7] Several studies have also reported a greater lifetime diagnoses of major depression, somatization disorder, generalized anxiety disorder, panic disorder and phobic disorder among IBS patients.[8] Psychiatric morbidity is prevalent in outpatients with IBS. The lifetime prevalence of depressive and anxiety disorders is up to 76% and 54% respectively. The point prevalence of depressive and anxiety disorders range from 9.6 to 54% and from 11.1 to 52.4% respectively.[9] Studies on psychiatric co-morbidity in IBS have found between a quarter and a third of IBS patients to meet criteria for somatization disorder, which is much higher than in the normal population.[10]

Perveen et al. reported that the prevalence of IBS was 7.7% in urban populations (male: female= 1:1.36) using Rome-II criteria.[11] A rural community based study in Bangladesh reported the apparent prevalence of IBS was 24.4% with a prevalence of 20.6% in men and 27.7% in women. With strict Rome criteria, the overall prevalence was 8.5% (10.7% in women and 5.8% in men).[12] A prospective hospital-based study was conducted by Alim et al.[13] using Rome-II clinical diagnostic criteria for irritable bowel syndrome. They found 96.5% had different psychiatric illness. Among them generalized anxiety disorder (24.4%), depressive illness (27.8%), somatoform disorder (12.7%) and hypochondriasis (10.4%) were the predominant abnormalities.

Materials and methods

It was a cross-sectional clinical study conducted in the department of Gastroenterology, BSMMU. Sampling technique was convenient. Diagnosed cases of IBS above 18 years of age of either sex were included in this study. Patients suffering from other co-morbid gastrointestinal disease and severe cognitive deficit difficult to interview were excluded. A semi-structured questionnaire for the study of "Psychiatric morbidity among patients with Irritable Bowel Syndrome (IBS)" was developed by the researcher. The questionnaire consisted socio-demographic variables which include general and specific information regarding age, gender, occupation, education, economic status. It was developed in English and Bangla version. The Structured Clinical Interview for DSM-IV Axis-I disorders- Clinician Version is a diagnostic assessment procedure.

The cases of IBS were selected by the consultant gastroenterologist according to Rome III criteria. Patients fulfilling the selection criteria, informed written consent were taken. Respondents were interviewed face to face by the researcher by using questionnaire for socio-demographic and relevant variables. After that SCID-CV was applied to assess psychiatric morbidity and confirmed by using DSM-IV criteria by the researcher. Analysis was done according to the Statistical Package for Social Science (SPSS) for windows version 20.

Results

Table 1 shows maximum (61.6%) were 21-40 years of age. The average age was 37.52 years. Male predominance was found. Majority (72.8%) were married. 64.4% were urban population, 7.2% were illiterate, 14.4% were primary level, 25.6% were secondary 16.8% were higher secondary, 20% were degree and 16% were masters. Maximum (28%) were house wife followed by 25.6% were farmer, 24% were service, 12% were business and 10.4% were labour.

Table 1: Socio-demographic characteristics of the study subjects (n=250)

Characteristics	Frequency	Percent
Age		
≤20	14	5.6
21-40	154	61.6
41-60	76	30.4
>60	6	2.4
	Mean (±SD):	37.52(±11.65)
Sex		
Male	152	60.8
Female	98	39.2
Marital status		
Married	182	72.8
Unmarred	68	27.2
Habitat		
Urban	160	64.0
Rural	90	36.0
Education		
Illiterate	18	7.2
Primary	36	14.4
Secondary	64	25.6
Higher secondary	42	16.8
Graduation	50	20.0
Postgraduation	40	16.0
Occupation		
Service	60	24.0
Business	30	12.0
Labour	26	10.4
Farmer	36	14.4
House wife	70	28.0
Student	28	11.2
Monthly income (in BDT)		
≤10000	34	13.6
10001-20000	156	62.4
20001-30000	32	12.8
30001-40000	16	6.4
>40000	12	4.8

Table 2 shows age, sex and education were statistically significant (P<0.05).

Table 3 shows significant association of duration and psychiatric illness (P<0.05).

Table 2: Association between socio-demographic characteristics and psychiatric illness (n=250)

Characteristics	Psychiatric illness				P value
	Present (n=216)		Absent (n=34)		
	No	%	No	%	
Age (in years)					
≤ 20	8	3.7	6	17.65	0.008
21-40	134	62.0	20	58.82	
41-60	68	31.5	8	23.53	
>60	6	2.8	0	00	
Sex					
Male	124	57.4	28	82.35	0.006
Female	92	42.6	6	17.65	
Marital status					
Married	160	74.1	22	64.71	0.254
Unmarried	56	25.9	12	35.29	
Habitat					
Urban	138	63.9	22	64.71	0.926
Rural	78	36.1	12	35.29	
Education					
Illiterate	18	8.3	0	0.00	0.015
Primary	34	15.7	2	5.88	
Secondary	50	23.1	14	41.18	
Higher secondary	32	14.8	10	29.41	
Graduation	46	21.3	4	11.76	
Post graduation	36	16.7	4	11.76	
Occupation					
Service	56	25.9	4	11.76	0.117
Business	20	9.3	10	29.41	
Labour	22	10.2	4	11.76	
Farmer	30	13.9	6	17.65	
House wife	57	26.4	7	20.59	
Student	23	10.6	5	14.71	
Monthly income (in BDT)					
≤ 10000	32	14.8	2	5.88	0.311
10001-20000	132	61.1	24	70.59	
20001-30000	26	12.0	6	17.65	
30001-40000	14	6.5	2	5.88	
>40000	12	5.6	0	0.00	

Table 3: Association between duration of illness and psychiatric illness (n=250)

Duration (years)	Frequency	Psychiatric illness				P value
		Present(n=216)		Absent (n=34)		
		No	%	No	%	
<1	87	69	79.3	18	20.7	0.001
1-2	64	51	79.6	13	30.4	0.001
>2	99	96	96.9	3	3.1	0.001

Figure 1 shows majority (86.4%) had psychiatric disorders among IBS patients. The difference was statistically significant (P<0.05).

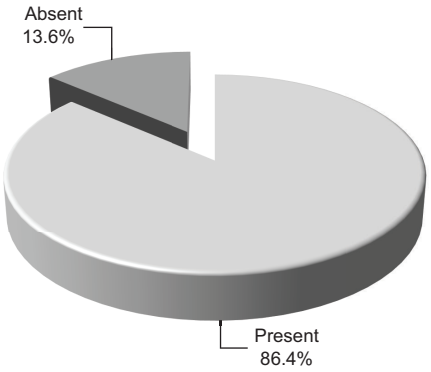

Figure 1: Proportion of psychiatric disorders among IBS patients (n=250)

Figure 2 shows maximum 97(44.9%) cases were generalized anxiety disorder (GAD) followed by 81(37.5%) were major depressive disorder (MDD), 55(25.5%) were somatoform disorder (SD), 14(6.5%) of panic disorder and 11(5.1%) of OCD.

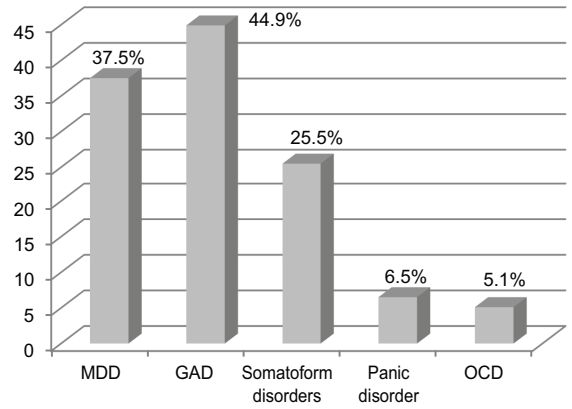

Fig. 2: Types of disorder among psychiatric morbidity (n=216)

(Note: More than one diagnosis was considered for each patient)

Discussion

The prevalence of psychiatric diagnosis in IBS ranges between 40% and 100% depending on the population, setting and diagnostic criteria.[14] Complaints of functional bowel symptom have been also found in 30-70% of patients with psychiatric disorder.[14] In this study 86.4% patients with psychiatric disorders were found among IBS patients. In this study most people in the sample were classified as having diarrhoea-predominant IBS of male predominance. The male female ratio was 1.5:1. This finding consistent with the study of Tung et al..[9]

In this study 61.4% of IBS patients were 21-40 age group. Married persons were suffering more. Regarding habitat, urban patients were found more. House wives had suffered more than other occupational groups. In a Bangladeshi study, 87.2% males were found and majority (55.8%) were in group 25-35 years.[13] The results of current study is consistent with the above study. This consistency of result may be due to study place. Both studies were conducted in tertiary hospital, which were situated in urban area. Previous studies have found female gender predominance in constipation-predominant IBS patients.[15,16] This sample had comparatively low levels of education with low income because they were recruited from gastroenterology clinics which serve country with comparatively low monthly family incomes.

Generalized anxiety disorder (44.9%) was the leading psychiatric illness in this sample. The point prevalence of generalized anxiety disorders was (36%) in another clinic-based study of similar sample size in Japan.[17] North American studies have found that anxiety disorders are highly prevalent in IBS outpatients (39.7-52.4%).[18] Earlier studies have reported a wide variation in generalized anxiety disorder point prevalence, from 2.8 to 58.[19] Alim et al.[13] reported that the main bulk of patients had got generalized anxiety disorder (24.4%). The percentage variation may be due to different sample size and more types of diagnosis of psychiatric disorders.

Major depressive disorder was the second commonest psychiatric illness in this sample, affecting 37.5% of IBS patients. It was very similar to that found by a clinic-based study (33.5%).[18] Another study in Bangladesh found major depressive illness was 10.4% of IBS patients. That was 4th higher diagnosis.[13] The difference with current study may be due to another diagnosis was made with mixed anxiety depression by Alim et al.[13]

Somatoform disorders were less prevalent than major depressive disorder and generalized anxiety disorder in this study (25.5%). Only 2 previous studies included IBS subjects diagnosed with somatoform pain disorder but their findings on lifetime prevalence differed greatly (0.8% versus 12.9%).[17,18] Alim et al[13] reported the 3rd highest diagnosis was somatoform disorder (12.7%). Regarding duration of illness, it was found in this study that 39.6% patients of IBS were higher proportion when it was more than 2 years. Among them 96.9% psychiatric illness were significantly found in chronic cases (>2 years). In this study, the socio-demographic and clinical characteristics did not have strong correlations with both psychiatric morbidity. Tung et al. (2005) reported the socio-demographic and clinical characteristics did not have strong correlations with both psychiatric morbidity.

Conclusion

This study shows generalized anxiety disorder was a leading psychiatric illness. Major depressive disorder was the second commonest psychiatric illness and somatoform disorder was third commonest psychiatric illness. Major depressive disorder and generalized anxiety disorder were higher in IBS-D. But somatoform disorder was higher in IBS-M. So, proper psychiatric evaluation is necessary for successful alleviation of the bothering symptoms of such incurable functional illness. There was a following limitation of this study: Populations were taken from single centre. So it was not reflection of whole population. It is recommended to improve referral and liaison services between psychiatrists and gastroenterologists for proper assessment and management of IBS patients.

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