ORIGINAL ARTICLES

STUDY ON FREQUENCY OF IRRITABLE BOWEL SYNDROME AMONG THE STUDENTS OF RAJSHAHI MEDICAL COLLEGE

MOHAMMADUNNABI[1] ARM SAIFUDDIN EKRAM[2]

Abstract:

Background: *This study was carried out to find out the frequency of IBS, symptoms pattern, health care seeking behavior among the students of Rajshahi Medical College.*

Objectives: *To find out the frequency of IBS among the students of Rajshahi Medical College, determine the pattern and frequency of gastrointestinal symptoms in students with IBS and find out health care seeking behavior of IBS subjects.*

Methods: *An observational descriptive cross sectional study was carried out after collecting data from 320 students of Rajshahi Medical college who fulfill inclusion and exclusion criteria by inviting them to filled out a questionnaire based on Rome III criteria for diagnosis of IBS from July 2009 to June 2010*

Results: *A total of 320 students with male 50%(160/320) and female50%(160/320)were included in this study. The overall frequency of IBS among the students of Rajshahi Medical college was32.5% with 35% in man and 30% in women. Abdominal pain or discomfort was present in 100% students with altered frequency of stool in 78.84%(P=0.00), altered stool consistency 80.00%(p=0.00) and pain relieved by defecation was present in 67.30%(p=0.00).Overall consultation rate in students of Rajshahi Medical College were 46.2% with 70.2% in male and29.8% in female (p=.001).*

Conclusion: *There was a higher frequency of irritable bowel syndrome among the students of Rajshahi medical college than the general population of Bangladesh. About half of them indeed seek health care advice. However the results of this study need to be confirmed in a large multi centre study.*

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Introduction:

Irritable bowel syndrome is a functional bowel disorder in which abdominal pain or discomfort and altered bowel habit in the absence of detectable structural abnormalities.[1] The diagnosis is based on clinical findings and exclusion of other disorders.[2] Symptoms compatible with diagnosis of IBS have been noted in up to 10-20% of adult population.[3] Fewer than 25% of these individuals, however, seek medical advice for their symptoms[3]. IBS accounts for 12% or more attendances to general practitioners and 28% of referrals to gastroenterologists[3]. It is generally recognized IBS occurs more frequently in women than men,[1] however male predominance of IBS was seen Pakistan, India, China, Hong Kong and Taiwan.[4-5] Though IBS is a disease of young adults and consider to be prevalent in Bangladesh detailed data on the frequency of IBS among medical students is lacking. The aims of the present study was to find out the frequency of IBS, symptoms pattern, health care seeking behavior among the students of Rajshahi Medical College by using Rome III criteria.

Materials and Methods:

An observational descriptive cross sectional study was done after collecting data by a redesigned questionnaire from the students of Rajshahi Medical College. The questionnaire evaluated general gastrointestinal symptoms health care seeking behavior and associated extra GIT symptoms of the subjects. The question were coded for analysis and data handling, comparison between groups were assessed using chi-squared test and p-value less than 0.05 was considered statistically significant. Data were analyzed by statistical package for social science (SPSS). 16-Chicago Illinois.

1. Indoor Medical Officer, Rajshahi Medical College
2. Professor & Head of the Department of Medicine, Rajshahi Medical College

Correspondence: dipu.imed13@gmail.com

Results:

Out of 320 students, it was found that 104 (32.5%) students had symptoms consistent with IBS with frequency 35% in men and 30% in women (table-I). Other than abdominal pain the common symptoms of IBS were altered stool frequency 78.84% (p=0.00), altered stool consistency 80.00%(p=0.00), pain relieved by defecation 67.30%(p=0.00), straining 60.00% (p=0.00), sense of incomplete evacuation 63%(p=0.00), passage of mucus 44.00%(p=.00) and abdominal distension was present in 45%(p=0.30) (table-II). Among the IBS subjects 62(59.0%) were diarrhoea predominant 34(32.69%) were constipation predominant and 8(7.69%) mixed (table-III). Drinking milk, taking fruits and green leafy vegetables has been associated with symptoms exacerbation in subjects with IBS than non-IBS subjects. Over all consultation rate in medical students were 46.2% with 70.8% in male and 29.2% in female (p=0.01) (table-IV). Abdominal pain associated with altered stool frequency and form(p=0.06), pain relieved by defecation (p=0.008), sense of incomplete evacuation (p=0.018),straining during voiding stool (p=0.002) and dyspeptic symptoms were predictor of health care seeking behavior in subjects with IBS (table-V).

Table-I

Frequency distribution of subjects by IBS-non IBS and sex

Sex	IBS		Non-IBS		Total	
	N	%	N	%	N	%
Male	56	35	104	65	160	50
Female	48	30	112	70	160	50
Total	104	32.5	216	67.5	320	100

Table-II

Frequency distribution of IBS-non IBS subjects by GIT symptoms

Symptoms	IBS (n=104)		Non-IBS (n=216)		Chi square	*p* - value
	N	%	N	%		
Alteration in stool form during abdominal pain	85	80	84	38.88	79.17	0.000
Frequency of bowel motion during abdominal pain	82	78.84	67	31.01	92.868	0.000
Abdominal pain relieved by defecation	70	67.30	48	22.22	86.397	0.000
Abdominal pain or discomfort	104	104	142	88.88	10.474	0.001
Straining during voiding stool	68	65	104	48.14	28.489	0.000
Sense of incomplete evacuation	66	63	108	50	25.294	0.000
Hurry	68	65	97	45	16.640	0.000
Passage of mucus	46	44	32	14.81	48.187	0.000
Abdominal distension	47	45	53	25	3.642	0.303
Heart burn	40	38	69	31.94	0.885	0.829
Belching	42	40	58	26.55	41.556	0.000
Bowel disturbances after drinking milk	46	44.23	25	12	68.292	0.000

Table-III

Bowel habit pattern in IBS subjects

IBS subtypes	Male		Female		Total	
	N	%	N	%	N	%
Diarrhoea predominant	32	30.62	30	28.84	62	59.61
Constipation predominant	20	19.23	14	13.46	34	32.64
Mixed	4	3.84	4	3.84	8	7.69
Total	56		48		104	100

Table-IV

Frequency distribution of IBS subjects who obtained consultation by sex

Consultation with doctor	Male		Female		Total		Chi-square	*p*-value
	N	%	N	%	N	%		
Yes	34	70.8	14	29.2	48	46.2	10.351	0.001
No	22	37.3	34	60.7	56	53.8		
Total	56	53.8	48	46.2	104	100		

Table-V

Symptoms characteristics of IBS among consulters and non consulters

Symptoms	Consulters (n=48)		Non consulters (n=56)		Chi square	*p*-value
	N	%	N	%		
Abdominal pain associated with altered stool frequency	42	87.5	40	71.42	5.634	0.060
Abdominal pain relieved by defecation	28	58.33	42	75	13.867	0.008
Alteration in the stool form during abdominal pain	42	87.5	39	69.64	3.051	0.217
Sense of incomplete evacuation	38	79.16	28	50	10.063	0.018
Straining during voiding stool	30	62.5	38	67.85	14.614	0.002
Passage of mucus with stool	28	58.33	18	32.14	12.194	0.007
Feeling of abdominal distension	12	25	22	39.28	4.014	0.260
Heart burn	26	54.16	14	25	14.933	0.002
Belching	24	50	18	32.14	13.133	0.004

Discussion:

The present study suggests that about one third of the students of Rajshahi Medical College has been suffering from IBS. This frequency of IBS (32.5%) was much higher than general population of Bangladesh (24.6%).[6] However, the frequency of IBS in studied group does not necessarily reflect that of general population. The reason for this discrepancy may be that the studied population consisted of students who were under stress and much aware of somatic symptoms. The frequency of IBS in present study correlate well with that of Pakistan where the prevalence of IBS has been reported to be 34% among the college students and result was almost similar.[7] IBS symptoms were reported more commonly by male than female which was consistent with previous regional studies like Pakistan, India, Srilanka. This male predominance may be explained that men have a greater tendency to recognize and report symptoms as compared to female. This is attributed to female natural reluctance in Asian culture. In our study, it was found that only 46.15% students with IBS visited to doctor for their symptoms and more common in male than female which was almost similar to Jafri et al[7] who reported 54% of medical students seek medical advice. The male predominant consultation frequency may be due to higher level of awareness & easier access to health care facilities for medical students. However findings of our study conforms well with that of the Drossman et al [8] and Heaton [9] who reported women were no prone to consult than man. Abdominal pain relieved by defecation, sense of incomplete evacuation and dyspeptic symptom were predictors of health care seeking in subjects with IBS which consistent with Drossman [10] and Heaton [9] who reported abdominal pain and sense of incomplete evacuation were predictor to obtain consultation.

Conclusion:

There was a higher frequency of IBS in students of Rajshahi Medical College that general population of Bangladesh. A significant proportion of students do not seek medical advice. However the results of this study need to be confirmed in large multi centre study.

References:

1. Owyang C. Irritable bowel syndrome. In: Kasper DL, Fauci AS, Longo DL, Braunwald E, Hauser SL, Jameson JL, Loscalzo J eds. Harrison's Principles of internal medicine. Volume-2. 17th ed. McGraw Hill Medical, New York, 2008: 1899-1903.

2. Thompson WG. The functional gastrointestinal bowel disorders. In.: Drossman D, ed. The functional gastrointestinal disorder. Mclean VA: Degnon Associates; 1994:117-34.

3. Friedman S. Irritable bowel syndrome. In: Berger NJG, Blumberg RS, Burakoff R. eds. Current diagnosis and treatment, gastroenterology, hepatology endoscopy. McGraw Hill edition, New Delhi 2009;279-90.

4. Jafri W, Yakoob J, Jafri N, Islam M, Ali QM. Irritable bowel syndrome and health seeking bevaviour in different communities of Pakistan. J Pak Med Assoc, 2007; 57(6):285-7.

5. Gwee KA. Defining IBS in India: A brave we world. Indian Journal of Gastroenterology 2008; 27:1-3.

6. Masud MA, Hasan M, Khan AKA. Irritable bowel syndrome in a rural community in Bangladesh: prevalence, symptoms pattern and health care seeking behavior. Am J Gastroenterol 2004; 96(5): 1547-52.

7. Jafri W, Yakoob J, Jafri N, Islam M, Ali QM. Frequency of irritable bowel syndrome in college students. J Ayub Med Coll Abbottabad 2005; 17 (4): 9-11.

8. Drossman DA, Sandler RS, Broom CM, Mokee DC. Lovits AJ. Bowel patterns among subjects not seeking health care: use of a questionnaire to identify population with bowel syndrome. Gastroenterology 1982; 529-34 .

9. Heaton KW, O'donnell LJD, Braddon FEM, Mount Ford RA, Huges AO, Crips PJ. Symptoms of irritable bowel syndrome in British Urban community: consulters and non consulters. Gastroenterology 1992; 102: 1962-7.

10. Drossman DA, Mckee DC, Sandler RS. Psychosocial factors in irritable bowel syndrome: A multivariate study of patients and non patients with IBS. Gastroenterology 1988;95:701-8.