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Extra Intestinal Manifestations of Irritable Bowel Syndrome

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ABSTRACT

Objectives: This study was done to assess the frequency of extra intestinal features present in patients with irritable bowel syndrome. **Design and place of study:** It was an observational study conducted in out-patient Department of Medicine, Shaikh Zayed Hospital, Lahore affiliated with Federal Postgraduate Medical Institute, over a period of two years from January 2005 to December 2006. **Subject and methods:** The patients fulfilling the Rome II criteria of IBS were included in the study. A check list of extra intestinal symptoms was administered to all the patients. **Results:** A total of 63 patients were included in the study. There were 41 men and 22 women (male to female ratio of 1.86:1) with the age range from 18 to 61 years (mean of 33.09 ± 8.5 SD). The mean duration of disease was 2.78 years. Urinary symptoms like frequency and urgency were present in almost one third of patients. These symptoms were more frequent in men (47%) than in women (33%). The most common non-specific pain was chronic headache (62%) followed by fibromyalgia (43%) and non-specific chest pain (37%) of all cases. All of these non-specific pain symptoms were more common in women. Dysmenorrhoea (45%) was the commonest genitourinary symptom in women while impotence and premature ejaculation each were seen in 7% of men. As a group sexual and genital symptoms were more common in women than men. **Conclusion:** Majority of the IBS patients along with intestinal symptoms also suffers from extra intestinal complaints. Therefore, these patients should be actively screened for the presence of these extra intestinal complaints so that a timely multidisciplinary intervention may prevent further prolongation of their misery.

Key words: Irritable bowel syndrome, Extra intestinal manifestations of IBS, Co-morbidity with IBS.

INTRODUCTION

Irritable Bowel Syndrome (IBS) is a syndrome characterized by chronic abdominal pain and altered bowel habits in the absence of any known organic cause. It is the second leading cause of absenteeism after common cold [1, 2,] and is the most commonly diagnosed gastrointestinal condition with reported prevalence of 10 to 15 percent. Prevalence rates of IBS range from 3% to 20% in the United States[3] and Europe.[4] It is also common in Japan, China, South America, and India, [5] accounting for 20%-50% of all referrals to gastroenterology clinics.[6] Patients with IBS have impaired health-related quality of life comparable to patients with other chronic medical and psychiatric disorders.[7] Irritable Bowel Syndrome affects both genders at all ages but younger patients and women are more likely to develop this condition. The cause of IBS is yet not clear. Altered gut motility and enhanced gut sensitivity have been proposed as the main patho-physiological mechanisms.[3]

Patients with IBS have protean manifestations with chronic abdominal pain and altered bowel symptoms as primary symptoms. As the disease lacks any biological disease marker, symptom based criteria have been used for the diagnosis of IBS. First such criteria was proposed by Manning *et al.* in 1978.[8] To standardize clinical research protocols, an international working team developed a consensus

definition (Rome criteria)[9] in 1992 which was revised in 1999 (Rome II criteria) as shown in Table 1.[10]

Patients with IBS have variety of extra-intestinal symptoms. These include urinary (frequency, urgency), sexual and genital symptoms (loss of libido, impotence, premature ejaculation, dysmenorrhoea, dyspareunia), generalized aches and pains, fibromyalgia, non-specific chest pain and headache.[11]

Table 1. Rome II criteria for diagnosis of IBS. [10]

At least 12 weeks, which need not be consecutive, in the preceding 12 months of abdominal discomfort or pain that has 2 of 3 features

1. Relieved with defecation; and/or
2. Onset associated with a change in frequency of stool; and/or
3. Onset associated with a change in form (appearance) of stool.

Symptoms that cumulatively support the diagnosis of IBS

1. Abnormal stool frequency (for research purposes, 'abnormal' may be defined as greater than 3 bowel movements per day and less than 3 bowel movements per week);
2. Abnormal stool form (lumpy/hard or loose/watery stool);
3. Abnormal stool passage (straining, urgency, or feeling of incomplete evacuation);
4. Passage of mucus;
5. Bloating or feeling of abdominal distention.

Purpose of the study

This study was done to assess the frequency of extra intestinal features present in patients with irritable bowel syndrome.

PATIENTS AND METHODS

It was an observational study conducted in out-patient Department of Medicine, Shaikh Zayed Hospital, Lahore affiliated with Federal Postgraduate Medical Institute, over a period of two years from January 2005 to December 2006.

Inclusion and exclusion criteria

The patients fulfilling the Rome II criteria (Table 1) for the diagnosis of IBS were included in the study while those with the following were excluded.

1. Patients known to have inflammatory bowel disease
2. Patients with gastrointestinal cancer or surgery
3. Patients with malabsorption syndromes
4. Patients with known thyroid disease

Patients presenting in the out-patient department of medicine who met the inclusion criteria and provided consent were enrolled for the study. The various extra-intestinal symptoms were inquired from the patients including urinary symptoms (frequency and urgency), sexual symptoms (impotence, premature ejaculation), genital symptoms (dysmenorrhoea, dysparunia), cardiac symptoms (non-specific chest pain, sweating, and palpitations), symptoms of fibromyalgia and headache. Duration of these symptoms was also noted.

General physical and abdominal examinations were done in all patients to detect any possible physical abnormality. Dermatological examination was also conducted to rule out various manifestations of malabsorption syndromes.

Following investigations were done in selected cases to rule out other possible pathological causes.

- Complete blood count.
- Stool examination.
- Thyroid function tests.
- Abdominal ultrasound.
- Endoscopy.

RESULTS

Patient's characteristics

A total of 63 patients were included in the study. There were 41 men and 22 women in the study with male to female ratio of 1.86:1. The ages of the patients ranged from 18 to 61 years with mean of 33.09±8.5 SD. The mean duration of disease was 2.78 years. The predominant symptom was diarrhea in 44 patients while 19 patients presented with constipation as predominant symptom. The frequency of diarrhea and constipation was similar in men and women.

Extra-intestinal features in patients with IBS

Urinary symptoms

Urinary symptoms like frequency and urgency were present in almost one third of patients as shown in Table 2. These symptoms were found to be more frequent in men (47%) than in women (33%).

Table 2: Urinary symptoms in patients with IBS.

	Frequency		Urgency	
	No.	%	No.	%
Men (n = 41)	21	51	16	39
Women (n = 22)	9	41	5	23
Total (n = 63)	30	48	21	33

Table 3: Non-specific pain symptoms in patients with IBS.

	Number	Percent
Fibromyalgia Like Symptoms		
Men (n = 41)	16	39.0
Women (n = 22)	11	50.0
Total (n = 63)	27	43.0
Non-specific headache		
Men (n = 41)	22	54.0
Women (n = 22)	17	77.0
Total (n = 63)	39	62.0
Non-specific chest pain		
Men (n = 41)	13	32.0
Women (n = 22)	10	45.0
Total (n = 63)	23	37.0

Non-specific pain syndromes

The patients were evaluated for symptoms of non-specific pain syndromes. The most common non-specific pain was chronic headache (62%) followed by fibromyalgia (43%) and non-specific chest pain (37%) of all cases as shown in Table 3. All of these non-specific pain symptoms were more common in women.

Sexual and genital symptoms

The women were evaluated for the presence of dysmenorrhoea and dyspareunia and loss of libido. These symptoms were present in about half of the women with dysmenorrhoea (45%) being the commonest symptom (Table 4). The men were evaluated for presence of impotence, premature ejaculation and loss of libido. Impotence and premature ejaculation were seen in 7% of cases each. As a group sexual and genital symptoms were more common in women than men.

Table 4: Sexual and genital symptoms in patients with IBS.

Symptoms	Number	Percent
Women (n = 22)		
Dysmenorrhoea	10	45
Dyspareunia	1	4.5
Loss of libido	1	4.5
Men (n = 41)		
Impotence	3	7
Premature Ejaculation	3	7
Loss of libido	0	0

DISCUSSION

Patients with IBS have protean manifestations with chronic abdominal pain and altered bowel symptoms as primary symptoms. As it lacks any biological disease marker, symptom based criteria have been used for the diagnosis of IBS.[8-10] In clinical practice quite a high proportion of IBS patients also complain of extra intestinal manifestations like urinary, sexual and genital symptoms and other non-specific pain syndromes which are not included in these criteria.[11] Co-morbid extra intestinal symptoms[12,13] are common and account for up to three fourth of health care visits by these patients.[14] Our present study was aimed at finding the frequency of these extra-intestinal manifestations of IBS and we report that four out of every five patients had at least one and more than half had many such symptoms along with intestinal complaints. Urinary symptoms were more common in men while considerably more women had non-specific headache, chest pain, fibromyalgia and genital complaints. These findings can be of conceptual and clinical importance in revising our approach towards patho-physiology, diagnosis and management of irritable bowel syndrome.

Exact patho-physiology of IBS is unclear. Abnormal gastrointestinal motility, visceral hypersensitivity, gastrointestinal infections and

psycho-social factors have been implicated and investigated without any conclusive answer. [15] Although IBS patients show enhanced stress responsiveness, specific psychosocial factors have not been considered characteristic of the disorder and are not included in the diagnosis. Psychosocial stress may exacerbate gastrointestinal symptoms due to alterations in gut motility, perception of visceral stimuli, illness experience and behaviours including pain reporting, physician visits and medication use. A history of major life stress, psychological trauma and abuse, co-morbid psychiatric disorders or maladaptive coping style are known to influence the clinical outcome.[15,16] The so-called "brain-gut" axis with selective attention to gastrointestinal sensations and more importantly disease attribution may be major contributing factors.

Medically unexplained physical symptoms including gastrointestinal symptoms are common in general population and are significantly associated with psychiatric disorders especially anxiety, depression and somatoform disorders.[17] Most of the patients suffering from chronic physical pain have been shown to have an elevated index of depression.[18] Conversely, it is a common observation that majority of the patients suffering from anxiety and depressive disorders presents with multiple somatic complaints like sexual, urinary and gastrointestinal symptoms. Direction of causation in this so called "psycho-soma" relationship is difficult to ascertain. It is quite likely that certain personality traits and visceral hypersensitivity and hyper-responsiveness predispose an individual to develop symptoms like that of irritable bowel syndrome. Similar psycho-pathological mechanisms along with longstanding distressing gastrointestinal symptoms, uncertain diagnosis, unsatisfactory treatment and resultant stress might be responsible in the causation of other pain syndromes commonly reported by patients suffering from IBS. Psychiatric disorders are commonly associated with IBS among clinic attendees, particularly in patients who fail to respond to treatment[19]. Studies on co-morbidity of psychiatric disorders with irritable bowel syndrome have found that 42 to 64% of the IBS patients have co-morbid anxiety and depressive disorders. [20,21]

Irritable bowel syndrome can be conceptualized within the biopsychosocial model of illness as a dysregulation of brain-gut axis and its relationships with psychosocial and environmental variables. Using advanced neuro-imaging techniques, it has been found that some brain centers (anterior cingulate cortex, limbic system, locus ceruleus) are active in mediating gut signals and that visceral hyperalgesia mediates perceptual sensitivity. Using new criteria for diagnosing psychosocial components of somatic illnesses, persistent somatization has been found as one of the main psychological factors that contribute to persistence of symptoms and poor treatment outcome in patients with IBS. From a psychological viewpoint, IBS may be conceived as an abnormal cognitive processing of emotional and visceral stimuli, a tendency to perceive somatic stimuli as evidence of symptoms of disease, and to seek repeated and often unnecessary medical care.[22]

Considerably more women as compared to men seek treatment for irritable bowel syndrome in the United States and Western Countries. However, in our study men out-numbered women which is consistent with previous studies done on IBS in Pakistan. [23, 24] This finding is quite in contrast to the observation that more women than men routinely attend out-patient departments of medicine and psychiatry. This gross difference may be a reflection of the fact that IBS is more common in men than women or a socio-cultural pattern of health seeking behaviour in eastern societies.

Keeping in view the unknown pathophysiology and a specific disease marker, high rates of extra intestinal manifestations and psychiatric co-morbidity in IBS patients, an integrative biopsychosocial model with a multidisciplinary approach is needed to understand the disease better and to adopt the most suitable treatment modality for individual patient.[25]

CONCLUSION

IBS is a common functional gastrointestinal disorder with uncertain pathophysiology; however, psychosocial factors may play an important role in individual patients. Majority of the IBS patients also suffers from extra intestinal manifestations and co-morbid psychiatric disorders like anxiety,

depression and somatoform disorders, especially those with prolonged illness. Therefore, these patients should be actively screened for the presence of these psychiatric disorders as well as for extra intestinal complaints so that a timely intervention may prevent further prolongation of their misery. An individualized approach to the assessment and management should be adopted while treating such patient and a multidisciplinary approach may prove prudent.

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