

# FREQUENCY OF ORGANIC PATHOLOGIES IN PATIENTS WITH IRRITABLE BOWEL SYNDROME

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## ABSTRACT

**Objective:** To evaluate Irritable bowel syndrome (IBS) labeled patients, meeting symptom based criteria of IBS, for organic pathologies.

**Material and Methods:** This descriptive study was carried out in Gastroenterology Department, Hayat Abad Medial Complex, Peshawar, during the period from March 2003 to March 2005.

A total of 85 consecutive patients were included in the study, who were labeled as IBS by the General Practitioners. All of them were meeting symptom based criteria (ROME II) for IBS. Informed consent was taken. Patients with alarm signs including dysphagia, rectal bleeding, anemia, weight loss, family history of colon cancer, were excluded from the study. Detailed history and physical examination was done. Laboratory evaluation, which included complete blood count, erythrocyte sedimentation rate (ESR), blood urea, serum creatinine, serum electrolytes, liver function tests, thyroid function tests, and stool examination for ova, parasites and culture when indicated, was done. Patients underwent Upper GI Endoscopy, Ultrasound of the abdomen, Flexible sigmoidoscopy and/or Full length colonoscopy as indicated. Other investigations like small gut biopsy, celiac serology and biopsy from the large gut were done as needed.

**Results:** Out of the 85 patients, 68(80%) were males and 17(20%) were females. Abdominal pain was the most common, present in 65(76 %) patients out of 85 patients. All these patients had mixed type of IBS symptoms, having both diarrhea and Constipation. Laboratory investigations were normal in almost all patients except in 5(5.8%) patients, who were having evidence of hypochromic microcytic anemia. All these five patients were having mixed pattern IBS. Three (3.5%) were males and their celiac serology and small gut biopsy showed evidence of celiac sprue. Ten (12%) of patients were having cysts of Amoeba in their stools routine examination but there were no trophozoites found. Another 15(17%) patients were having non significant hemorrhoids on lower GI endoscopy. 17(20%) of patients were having antral gastritis on EGD, but the biopsy showed non specific gastritis.

**Conclusion:** Irritable bowel syndrome can be diagnosed clinically, using ROME II criteria and a few inexpensive and non invasive tests. In patients with IBS-D and IBS-M routine serological screening for celiac sprue may be a cost effective strategy.

**Key Words:** Irritable bowel syndrome (IBS), Celiac sprue.

## INTRODUCTION

Irritable bowel syndrome (IBS) is a functional gastrointestinal syndrome of chronic abdominal pain and altered bowel habits without any organic cause. It is the most commonly diagnosed gastrointestinal condition. Approximately 5 to 10 percent of the North

Americans are affected by IBS with a pooled prevalence of 7%.<sup>10,11,12,18</sup> European studies found an overall prevalence of 11.5 percent, however, there is wide variation in the prevalence among different countries.<sup>4</sup> In a Karachi based study an overall frequency of 10% have been noted in the local population.<sup>13</sup>

**SUMMARY OF DIAGNOSTIC CRITERIA USED TO DEFINE IRRITABLE BOWEL SYNDROME**

Diagnostic criteria	Symptoms, sign, and Laboratory investigations included in criteria
<b>Manning (1978)</b>	IBS is defined as the symptoms given below with no duration of symptoms described. The number of symptoms that need to be present to diagnose IBS is not reported in the paper, but a threshold of three positive is the most commonly used: <ol style="list-style-type: none"> <li>1. Abdominal pain relieved by defecation</li> <li>2. More frequent stools with onset of pain</li> <li>3. Looser stools with onset of pain</li> <li>4. Mucus per rectum</li> <li>5. Feeling of incomplete emptying</li> <li>6. Patient-reported visible abdominal distension</li> </ol>
<b>Kuris (1984)</b>	IBS is defined by a logistic regression model that describes the probability of IBS. Symptoms need to be present for more than two years. <p>Symptoms:</p> <ol style="list-style-type: none"> <li>1. Abdominal pain, flatulence, or bowel irregularity</li> <li>2. Description of character and severity of abdominal pain</li> <li>3. Alternating constipation and diarrhea</li> </ol> <p>Sign that exclude IBS (each determined by the physician):</p> <ol style="list-style-type: none"> <li>1. Abdominal physical finding and/or history pathognomonic for any diagnosis other than IBS</li> <li>2. Erythrocyte sedimentation rate &gt; 20 mm/2h</li> <li>3. Leukocytosis &gt; 10,000/cc</li> <li>4. Anemia ( Hemoglobin &lt; 12 for women or &lt; 14 for men)</li> <li>5. Impression by the physician that the patient has rectal bleeding</li> </ol>
<b>Rome I (1990)</b>	Abdominal pain or discomfort relieved with defecation, or associated with a change in stool frequency or consistency, PLUS two or more of the following on at least 25% of occasions or days for three months: <ol style="list-style-type: none"> <li>1. Altered stool frequency</li> <li>2. Altered stool form</li> <li>3. Altered stool passage</li> <li>4. Passage of mucus</li> <li>5. Bloating or distension</li> </ol>
<b>Rome II (1999)</b>	Abdominal discomfort or pain that has two of three features for 12 weeks (need not be consecutive) in the last one year: <ol style="list-style-type: none"> <li>1. Relieved with defecation</li> <li>2. Onset associated with a change in frequency of stool</li> <li>3. Onset associated with a change in form of stool</li> </ol>
<b>Rome III (2006)</b>	Recurrent abdominal pain or discomfort three days per month in the last three months associated with two or more of: <ol style="list-style-type: none"> <li>1. Improvement with defecation</li> <li>2. Onset associated with a change in frequency of stool</li> <li>3. Onset associated with a change in form stool</li> </ol>

Younger patients and women are more likely to be diagnosed with IBS. However it affects men and women, young patients and the elderly as well. There is an overall 2:1 female

predominance in North America.<sup>3</sup>Of all referrals to the gastroenterologists, IBS in its various forms comprises about 25 to 50 percent.<sup>5</sup> IBS is the second highest cause of work absenteeism after the

**OCCUPATION OF THE PATIENTS INCLUDED IN THE STUDY**

Shop keepers	30
College students	16
House wives	14
Police and traffic personals	10
Drivers	7
Paramedical staff	3
Nursing staff	2
School teachers	2
Physicians	1

Table 1

common cold.<sup>6</sup>

According to current clinical guidelines,<sup>1,2,7,8</sup> generally IBS can be diagnosed by a careful history taking, a general physical examination, and routine laboratory studies (not including colonoscopy) in all patients who have no warning signs and that their symptoms meet the Rome criteria. The Rome II criteria has reasonably good sensitivity and specificity in diagnosing IBS.<sup>8-9</sup> These warning signs include rectal bleeding, anemia, weight loss, fever, family history of colon cancer, onset of the first symptom after 50 years of age, and a major change in symptoms.

Different criteria have been devised to define IBS as mentioned below. We used the Rome II criteria in our study, for the diagnosis of IBS.

The objective of this study was to find out organic pathology in those patients who were labeled as IBS by the General Practitioners and who presented to the Gastroenterology Department, Hayat Abad Medical Complex.

**MATERIAL AND METHODS**

The study was conducted in Gastroenterology Department, Hayat Abad Medical Complex, Peshawar, during the period from March 2003 to March 2005. It was a descriptive study. All patients with alarm signs including dysphagia, rectal bleeding, anemia, weight loss, family history of colon cancer, were excluded from the study. A total of 85 patients were included in the study, who were meeting symptom based criteria for IBS and were labeled as IBS by the General Practitioners. Informed consent was taken from all the patients who were included in the study.

The Rome II criteria were used for diagnosing IBS and data thus collected was filled out in forms.

Detailed history was taken from all these patients. General physical examination and laboratory evaluation was done. The laboratory

**AGE DISTRIBUTION OF THE PATIENTS INCLUDED IN THE STUDY**

16-35years	57
36-45years	15
46-50years	10
51-65years	2
66-75years	1

Table 2

evaluation included complete blood count, erythrocyte sedimentation rate (ESR), blood urea, serum creatinine, serum electrolytes, liver function tests, thyroid function tests, and stool examination for ova, parasites and culture when indicated. Patients who had upper gastrointestinal symptoms like dyspepsia, heart burn and pain in the right upper quadrant were also subjected to an Upper Gastrointestinal Endoscopy (EGD) and Ultrasound of the abdomen.

Patient who had lower Gastrointestinal symptoms were subjected to Flexible sigmoidoscopy and/or Full length colonoscopy as indicated. Other investigations like small gut biopsy, celiac serology and biopsy from the large gut were done as needed.

**Inclusion criteria.** Eighty five patients of age 16 years and above were included in the study. They were meeting symptom based criteria (Rome II) for IBS.

**Exclusion criteria.** All patients with alarm signs including dysphagia, rectal bleeding, anemia, weight loss, family history of colon cancer, were excluded from the study.

**RESULTS**

Out of the total 85 patients, 68(80%) were males and 17(20%) were females.

**NUMBER OF PATIENTS WITH ORGANIC PATHOLOGIES AND THEIR PERCENTAGES**

Organic pathology	No of patients	Percentage
Celiac sprue	3	3.5%
Asymptomatic amoebic cyst passers	10	12%
Non significant hemorrhoids	15	17%
Non specific antral gastritis on EGD	17	20%

Table 3

The age range was 16 years to 75 years. The mean age was 36 years. The duration of their symptoms varied from 3 – 9 months. Out of many presenting complaints, abdominal pain was the most common, present in 65(76 %) patients out of 85 patients. All these patients had mixed type of IBS symptoms, having both diarrhea and constipation. Out of these 65 patients, 50(77%) were males and 15(23%) were females. Six (7%) patients were lacking the typical IBS symptoms. Diarrhea was the main presenting complaint in 10(12%) patients while constipation was the presenting complaint in 4(5%) patients. A total number of 30(35%) patients were having symptoms of anxiety and depressive illness with associated somatization disorder. Six (7%) of patients had epigastric tenderness on clinical examination while another 25(29%) patients were having tenderness in the lower abdomen on clinical examination.

Laboratory investigations were normal in almost all patients except in 5(5.8%) patients, who were having evidence of hypochromic microcytic anemia. All these five patients were having mixed pattern IBS. Two (2.3%) of these patients were females and were having heavy menstrual flow. Three (3.5%) were males and their celiac serology and small gut biopsy showed evidence of celiac sprue. We did celiac serology and small gut biopsy in the male patients because their anemia was not explainable on the basis of their IBS like symptoms. Ten (12%) of patients were having cysts of Amoeba in their stools routine examination. But there were no trophozoites found in their stools. Also these patients were having no symptoms and signs of amoebic dysentery. Another 15(17%) patients were having non significant hemorrhoids on lower GI endoscopy. These patients were having no bleeding per rectum. 17(20%) of patients were having antral gastritis on EGD, but the biopsy showed non specific gastritis. The endoscopic findings of gastritis was not explaining the symptoms of IBS in all these 17 patients.

## DISCUSSION

A total of 85 patients were included in our study that were labeled as IBS by the General Physicians. Out of these 85 patients, 82 were of the age below 50 years. Similarly only 3 patients were above 50 years of age. Similar findings have been reported in different international studies done in the recent past.<sup>10-12</sup> Also in a study done in Agha Khan University Hospital by Wasim Jafri, Javed Yakoob and Nadim Jafri et al, the age of 74 patients out of 76 was less than 50 years.<sup>13</sup>

In our study, out of the total 85 patients, 68(80%) were males and 17(20%) were females.

Although IBS has been found to be more common in women but its not a disorder of female gender alone. This fact has been recognized in the predominantly male population of soldiers deployed in the Gulf war in 1991.<sup>14-16</sup> The trend in the Asian countries also is that more male patients are diagnosed with IBS.<sup>13,17</sup> Probably in a very conservative society like the one in NWFP there is a natural reluctance of females to seek medical advice. This is also suggested by the findings that the third largest group of IBS patients in our study was formed by the house wives.

In our study abdominal pain was the most common presentation, present in 65(76 %) patients out of 85 patients. All these patients had mixed type of IBS symptoms, having both diarrhea and constipation. Mixed pattern IBS has also been reported to be the most common presentation in a study done in USA.<sup>12</sup> Also this pattern was noted to be the predominant one in patients with IBS in Karachi.<sup>13</sup>

In our patients IBS was more common in the low income group. Similar association has been described in two studies in the recent past.<sup>14, 18</sup>

Fifteen (17%) patients were having hemorrhoids on lower GI endoscopy. Findings consistent with our results have been noted in another local study.<sup>13</sup>

A total number of 30(35%) patients were having symptoms of anxiety and depressive illness with associated somatization disorder. Many different studies have reported similar association.<sup>13, 19-21</sup>

Three (3.5%) of our patients had their celiac serology and small gut biopsy positive for celiac sprue. Very similar findings have been noted in multiple case control studies.<sup>22-24</sup> If the prevalence of celiac sprue exceeds 1% then serologic screening remains a cost effective approach.<sup>25, 26</sup>

## CONCLUSION

Our study shows that Irritable bowel syndrome can be diagnosed with history and physical examination, using the ROME II criteria. These patients should not be subjected to expensive and extensive investigations unless otherwise indicated. Proper counseling and reassurance is enough to make such patients satisfied. Usually relatively inexpensive and non invasive tests are needed to rule out organic causes. However in patients with IBS-D and IBS-M, who have anemia as well, routine serological screening for celiac sprue seems to be a cost effective strategy as the evidence is suggesting for.

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