

ORIGINAL ARTICLE

Understanding of Irritable Bowel Syndrome among General practitioners in the Periphery of Lahore

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ABSTRACT

Objective: To determine the understanding of irritable bowel syndrome among general practitioners in Lahore in terms of diagnosis and treatment.

Study Design: Observational, cross sectional study.

Place and Duration of Study: Department of Medicine, University of Lahore Teaching Hospital, Lahore from 1st October 2020 to 31st March 2021.

Methodology: Two hundred and ninety eight patients from both urban and rural territory in Lahore were enrolled. Manning and Rome criteria were applied to establish diagnosis of irritable syndrome. Patient's history, investigations and final diagnosis were recorded. After three months, patients were reassessed for final diagnosis and any alternative diagnosis if under consideration.

Results: There were 180 (60.4%) females and 118 (39.6%) males with mean age of 34 years. About 70 patients presented with GIT complains were functional and 45 with organic problems. Out of 70 functional patients, 45 have irritable bowel syndrome. The condition was functional or organic quite inadequate and amounted to 56%.

Conclusion: Majority of irritable bowel syndrome patients were either wrongly diagnosed by the general practitioners or inadequately treated.

Key words: Irritable bowel syndrome (IBS), Functional and organic diarrhea.

INTRODUCTION

Irritable bowel syndrome or disease is a functional disorder of gastrointestinal tract characterized by troublesome abdominal pain relieved by defecation and sense of incomplete evacuation. Gastrointestinal tract is the primary source of reactive oxygen species (ROS) which play a key role in normal metabolic pathways and normal functioning of gut. The two essential components of normal human metabolism are reactive nitrogen species (RNS) and reactive oxygen species (ROS) and any changes in these two components can result in catastrophic consequences with primary pathophysiology being oxidative stress.¹ The possible association of oxidative stress with numerous known gastrointestinal disorders including IBS and pathologies including premature ageing phenomenon, cardiovascular and kidney injuries, malignancy, and neuropathic disorders like Alzheimer's disease.² Apart from gastrointestinal tract, brain is a strong source of reactive oxygen species (ROS). The complex interaction between gut and brain results in functional gut disorders like irritable bowel syndrome.³ In fact, many of the functional GIT pathologies originate from such over responsive oxidative modulation, which is known as oxidative stress.⁴ Studies reveal that chronic gut inflammation is strongly linked with excessive generation of reactive oxygen and nitrogen species.⁵ Additionally, some studies have shown that inflammation is generally a key component of the GIT diseases.⁶⁻⁸

Human body particularly gastrointestinal tract is inhabited by approximately 39 trillion microbial cells resulting in generation of a dynamic, perfectly scrutinized ecological environment famously termed as the microbiota. The microbiota consists of viruses, bacteria, fungi and protozoa, constituting about 20 million genes.^{9,10} Microbiota

and the ecological environment are critical to the maintenance of a health and functional gut exerting important functions such as energy extraction from different nutrients, metabolizing xenobiotics, controlling gut motility and keeping epithelial barrier intact.¹¹ It is now recognized worldwide that constituents and function of gut microbiota potentially contribute to the pathophysiology of functional GI disorders.

Irritable bowel syndrome (IBS) is the most common and well recognized of all the functional gut disorders and generally poorly understood by the general practitioners in terms of diagnosis and management. The purpose of the current study is to determine the pitfalls on behalf of general physicians while diagnosing and managing irritable bowel syndrome.

MATERIALS AND METHODS

This observational cross-sectional study was conducted at Department of Medicine, University of Lahore Teaching Hospital, Lahore from 1st October 2020 to 31st March 2021. Two hundred and ninety-eight patients from both urban and rural territory in Lahore were enrolled. A brief history of the patient was taken, those patients who consented for the research were asked for a brief interview about their visit and any other complaint. Patients were asked about the main complaint for which they visited the doctor, and any other related complaint was also noted. After a brief interview, those patients who had a GIT complaint were screened out, consent was taken and with their permission their previous medical record was also explored. Patient was requested to fill a questionnaire which had been validated previously by the experts of the field. To establish the diagnosis of IBS or functional bowel habits Manning and Rome criteria was followed. The same

team member than interviewed the doctor about the concerned patient. A separate questionnaire was used concerning the history of the patient, investigations, and final diagnoses. After three months another visit was made to the doctor, the record of the patient was reviewed, and the best possible diagnoses were made from all the available resources. If there was a discrepancy, new diagnosis was concluded using index complaints about functional disorder of GIT complaints. Rome or Manning criteria were applied to diagnose Irritable bowel syndrome. The data was entered and analyzed through SPSS-24.

RESULTS

There were 180 (60.4%) were female and 118 (39.6%) male with mean age of 34 years. Only 45% were labelled as irritable bowel syndrome while the rest were wrongly diagnosed as acid peptic disease not responding to standard treatment (24.8%), intestinal tuberculosis (14.7%), inflammatory bowel disease (7.7%), nonspecific colitis (7.4%) and intestinal malignancy (0.4%) [Table 1]. Among the 45% patients rightly diagnosed as irritable bowel syndrome by the general practitioners, only 65% were treated according to the standard protocols (Table 2). Among irritable bowel syndrome patients, a number of variations were noted in terms of symptomatology. Majority of the patients presented with abdominal pain (55%) followed by constipation (20%), diarrhea (15%), nonspecific epigastric discomfort (10%), bloating (8%) as illustrated in figure 1.

Table 1: Diagnosis of different diseases (n=298)

Disease	No.	%
Functional (IBS)	134	45.0
Acid peptic disease	74	24.8
Intestinal tuberculosis	44	14.7
Inflammatory bowel disease	23	7.7
Nonspecific colitis	22	7.4
Intestinal malignancy	1	0.4

Table 2: Right versus wrongly treated IBS patients (n=134)

Variable	No.	%	P value
Right treatment given	87	65.0	0.0001
Wrongly treated	47	35.0	

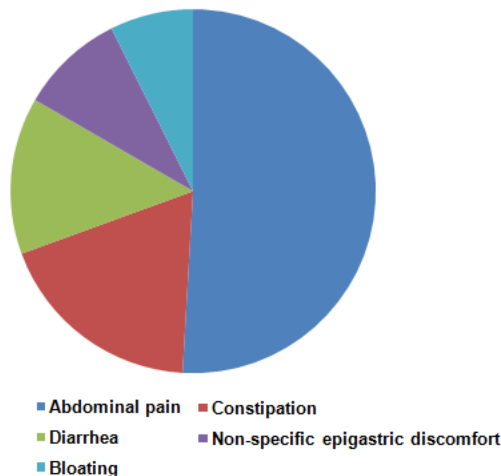


Fig. 1: Different presentation of IBS

Table 3: Various responses of patient with IBS and Organic disease

Patient response	Organic disease	IBS	P value
Serious disease phobia	20	27	0.084
Cancer phobia	15	23	0.04
Fear of untreatable disease	14	23	0.04
Relieve of symptoms after first visit	25	13	0.004
Increase in symptoms with stress	21	30	0.004
Absence from duty due to symptoms	12	8	0.258
Disturbed social life	26	32	0.247

The phobia about some serious problem outnumbered in patients with IBS as compared with patients with some organic problem with *p* value 0.084. Similarly, the phobia of cancer in IBS is far more than patients with some organic disease with *p* value < 0.04. Patients with IBS have a fear that they are not going to recover which is more than patients with organic disease. After first visit to the family physician patients with organic disease showed remarkable improvement as compared to patients with IBS with *p* value <0.004, same value is reflected in patients with IBS who showed increased in their symptoms under stress as compared to patients with organic disease (Table 3).

DISCUSSION

The symptoms observed by the patients with IBS are diverse. In our study, majority of the patients manifested as abdominal pain (55%) and constipation (20%). This data is similar to a study conducted by Neri et al¹² and Hammer et al where abdominal pain was found in 50% of the cases closely followed by diarrhea (20%) rather than constipation as in our case.¹³ Another study conducted in Egypt by Ahmed et al¹⁴ reported that 52% patients had diarrhea alternating with constipation, results slightly different than our study. In another study conducted by Rubin et al¹⁵ results favored the current study (45% patients had abdominal discomfort) in terms of percentage but patients described it as annoyance rather than typical pain. The major reason being that at this level the number of patients attended by the family physician is quite large and they don't spare much time to these patients who also have some added psychological problems, while studying the comorbidities (OR 1.22) and sleep disorders (OR 5.40), the conclusion drawn by Norlin et al¹⁶ supported our study. Once such screening is done patients either continue with the treatment offered by the family physician or they themselves decide to seek attention from a specialist physician. However, a small group of patients are referred to specialist by the family physician who feels that such patients should have an expert opinion, a study conducted in 2016 by Williams et al¹⁷ and another study conducted by Bellini et al¹⁸ supports the present study.

Present study confirms that GIT complains are one of the leading cause of attending family physicians and majority (45%) of these complaints are functional rather than organic. Similar results (55%) were found in a study conducted by Camilleri et al¹⁹ and a study conducted in 2015 by Schmid et al²⁰ supports current study with nearly half (50%) being functional.

In the present study, IBS patients had serious disease phobia in 27 subjects (9%), cancer phobia in 23 subjects (7%) and fear of untreatable disease in 23 subjects (7%). Almost similar percentage with a slight difference of 12% patients having cancer phobia was found in a study

conducted by Blomhoff S et al.²¹ In the present study, general physicians were able to correctly diagnose IBS in 45% (n=134) cases whereas 55% (n=164) were having wrong diagnoses. These findings coincide with studies conducted by Vyas²² (45% wrongly diagnosed, slightly lower than our study) and Al-Shamrani et al²³ (50% wrongly diagnosed) in Saudi Arabia. All the family physicians in the present study are making final diagnosis of IBS through their back ground knowledge or the experience they have gained with time, a study conducted in 2019 by Brown-Lieberson²⁴ supports the present study. However, despite all the shortcomings on the part of general practitioners, Rangan et al²⁵ Ballou and Lembo²⁶ observed a significantly high percentage (80%) of patients had satisfaction about their diagnosis and treatment, a finding above the scope of the present study and potential topic for research in future on possible causes of such high patients satisfaction rate. Also, the treatment offered to such patients is benefiting these patients also but in a different way, this theory put forward by Simrén and Tack²⁷ and Enck and Mazurak needs further research and interrogation.²⁸

To address the causes of wrong diagnosis and treatment of IBS by the general practitioners, Mahmoudi et al reported that system failure in providing general practitioners proper training and medical education, inability on the part of general practitioners to keep pace with latest updates and variations in patient's history are the possible contributors.²⁹ The present study, although, did not focus on possible causes, but it did pave a way for further research on the topic.

CONCLUSION

Majority of IBS patients were either wrongly diagnosed by the general practitioners or inadequately treated.

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