INTRODUCTION

Irritable bowel syndrome (IBS) is a functional disorder of the gastrointestinal tract which is the most common disorder diagnosed by gastroenterologists and is encountered very commonly in general practice. Most estimates from US have shown a prevalence of 10 – 15% in general population and thus 30 millions people in North America carry a diagnosis of IBS. Prevalence in United Kingdom population has been reported to be 9 – 12%. In Asia, the prevalence of functional bowel disorders including irritable bowel syndrome has been reported to be over 50% in general population. In a study from Singapore, IBS and functional disorders were a common place and reflux type symptoms were more common in certain ethnic groups. A study in rural population of Bangladesh, following strict Rome criteria had shown an overall prevalence of 8.5% and 35% of the IBS patients had consulted a physician for their symptoms.

In Pakistani population, the prevalence of IBS has been reported to be 34% in college students; it was higher in medical students, who more often sought medical attention. IBS has been reported to be more common in healthcare workers and 80% of them showed anxiety and depression in them. Functional disorders incur huge costs to the society. The presentation of IBS in the population has been different than Western countries. Although previous studies in Pakistan have reported prevalence of IBS, no long-term follow-up study of these patients have been carried out to assess the course and natural history of this illness.

The aim of this study was to prospectively follow patients with IBS and assess their symptom profile, the disease course over a period of time, and their health seeking behaviour with frequency of return follow-up visits.

METHODOLOGY

This was a prospective observational study where the patients were followed for 15 years by a single physician at Gastroenterology Clinic of Shifa International Hospital, Islamabad, Pakistan. The study was carried out from July 1996 to June 2011. Their diagnosis was made according to the Rome criteria.

In addition to meeting the clinical criteria as mentioned, these patients had complete blood count (CBC) profile, erythrocyte sedimentation rate, stool examination and in several cases, they underwent flexible sigmoidoscopy or colonoscopy, upper gastrointestinal (GI) endoscopy and other appropriate chemistry profiles as baseline evaluations. Endoscopic examination was performed in nearly 70% patients. All these procedures were normal.
in all patients. Their symptoms profiles were noted and they were followed periodically either at physician's request or as needed, at patient's request. Concomitant illnesses, hospitalizations, any surgeries, any change in diagnosis, aggravating factors, alternative treatments sought and their medical management and its results were recorded.

The data were analyzed using Statistical Package for Social Sciences (SPSS) version 15. Categorical variables such as symptoms and aggravating factors were assessed by using chi-square test. Continuous variables such as age, height, were expressed as mean ± SD. A p < 0.05 was considered to be statistically significant.

RESULTS

There were 292 patients in total, with 156 (53.4%) males and 136 (46.6%) females. Mean age was 40.44 ± 13.69 years, mean height was 164.3 ± 8.95 cm and mean weight was 64.83 ± 12.31 kg (Table I). These features did not show significant differences in study population.

Abdominal pain and bloating were noted to be present in nearly all the male and female patients which occurred at different times and which was the part of the diagnostic criteria. Constipation was found in 116 of 136 females (79.9%) and 119 of 156 males (69.8%). Diarrhea and both constipation and diarrhea were noted in significant number of patients (Table II). Twenty eight out of 136 women (20.6%) patients were housewives. Next most common category was businessmen, which were 63 out of 156 (40.3%), followed by professionals, students, and labourers. Many of these patients had concomitant gastrointestinal and non-gastrointestinal conditions. Fifty-eight (19.8%) out of total of 292 patients had other diagnosis. Commonest associated diagnoses were depression (5.1%), gastroesophageal reflux (4.2%) and hypertension (3.2%). Out of 292 patients, 73 had anti-transglutamine antibodies performed and 13 (17.8%) were positive.

These patients were followed for 15 years and mean visits by these patients were 10 (range 6 – 22). These were at either physician’s request or at patient’s request. There were 272 admissions from these patients over this period of time which were either related to gastrointestinal symptoms or from non-gastrointestinal conditions. Twenty-five patients underwent cholecystectomy and 18 underwent hysterectomy. None of the patients died, either as a result of surgery or as a result of gastrointestinal symptoms during the follow-up period. During the follow-up period, none of the patient’s original diagnosis was changed. Although the symptoms fluctuated over the period of time and some of them became dominant as reflux symptoms and other times peptic symptoms but the main diagnosis remained irritable bowel syndrome.

Over the years, these patients return visits and clinical features suggested that the symptoms were aggravated with infections, drug ingestions, stress, travel and food sensitivities and many of them had sleep disturbances (Table III). Out of 292 patients, 206 (70.5%) were treated with bulking agents, mainly consisting of Isphagol Husk during the follow-up period. Eighty two (26.3%) patients received spasmolytics. Ninety-eight (31%) were treated with tegaserod, when it was available. More patients at one time received anti-depressants, anti-diarrheals and symptomatic treatment. Ninety-five percent patients sought alternative therapy during the follow-up period. This mainly consisted of homeopathic and herbal treatment.

DISCUSSION

The patients in this study were relatively younger in age than had been noted in previous studies. Although many studies have shown that females have more IBS, in this study, males outnumbered females. The present study population may be similar to another study where there was preponderance of males. This could be due to either the socio-cultural features of our part of the world or it could be a different healthcare seeking behaviour on the part of males who presented more often to physicians in this study. A study from a low income urban slum of Pakistan showed equal gender
prevalence. The psycho-social factors and life event stress and personality disorders have been noted to be the factors which can predict health seeking behaviour from IBS patients. These patients were followed at the same location by the same physician over the period of years. After initial diagnosis and appropriate work-up, their condition was discussed in detail with the patients, and in this way, the patient’s anxiety and fears were alleviated. This helped patient accept the diagnosis and return visits became infrequent.

There were more females suffering from constipation, which has been the case with other studies. Several patients noted aggravation of the symptoms on taking various medications and antibiotics. Some of these patients suffer from these symptoms for years and various cytokines have been reported to be present in these patients. Some irritable bowel syndrome patients have been noted to have significantly elevated levels of IgG2 sub-class antibody level to Blastosystis hominis, which may be a contributory factor to the symptoms in these patients. In diarrhea dominant patients, small intestinal bacterial overgrowth have been reported with no regard to gender.

Several patients were noted to have aggravation of symptoms due to food sensitivities, which have been found to be the case with these patients. A large number of these patients are noted to have sleep disturbances. Common mental disorders were found more commonly and were strongly associated with IBS compared to other chronic diseases in a study from Karachi. Similarly, a study on students in Karachi showed that psychological symptoms of anxiety were encountered in 55.8% participants with IBS, among which males were 15.7% and females 84.2%, respectively. Aggravation of their symptoms in several women was noted during and just prior to menstrual periods and hormones could have relationship with these symptoms, as has been postulated in earlier studies.

Treatment in these patients was generally bulk forming agents. There have been many reviews of the treatment of IBS and use of the large number of drugs in these patients consisting of spasmolytics, anti-diarrheals, anti-depressants and anxiolytics have been advocated. Bulk forming agents have caused significant difference in bowel habit and transit time in patients with constipation. Spasmolytics have been found helpful in some patients. Anti-depressants have been noted to produce greater improvement than placebo. Many of these studies are hampered due to marked placebo response in patients with IBS, which averaged 47% in a recent survey of randomized controlled drug trials. It is because of this reason and lingering symptoms over the years that makes so many people seek alternative therapies for their symptoms. Many studies have shown that combination of medical treatment with multi-component behavioural therapy was superior to medical treatment alone in treatment of these patients.

Eighteen percent patients who were positive for celiac disease markers. Possible relationships between migraine, IBS, celiac disease, and gluten sensitivity have been postulated, as these seemingly distinct entities may share many common epidemiological, psychosocial, and pathophysiological similarities. The association of IBS and celiac disease has been well documented recently.

The limitations of the study include experience of a single institution and single physician in a single geographic location. Other regions of the country with different investigators may yield different results. Thus, the conclusions of this study may not be applicable to entire population of the country.

**CONCLUSION**

This study shows male preponderance in this cohort but the symptoms profile has been same as seen in the previous studies in the other parts of the world. Aggravating factors were also similar. The overall prognosis of this condition remained excellent, however, many patients sought alternative therapy for their condition.

**REFERENCES**


