Original Article

Irritable bowel syndrome and health seeking behaviour in different communities of Pakistan

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Abstract

Objective: To investigate the frequency of irritable bowel syndrome (IBS) and health seeking behaviour in patients belonging to different ethnic groups and their squatter settlements in two cities of Pakistan. **Methods:** Questionnaire based on Rome II criteria for the diagnosis of IBS was sent to 1167 persons living in, Karachi and Bahawalpur and their squatter settlements in Baloch Colony and Tibba Badar Sher respectively. About 90% (1048) completed the questionnaire.

Results: The overall frequency of IBS was 14 % with a mean age of 30 ± 12.5 years and range of 16-85 years. Of the IBS positive patients, 56% (82/146) were males. IBS was significantly more common (p= 0.05) in males belonging to age group16-30 years. The most common presenting symptoms were abdominal pain (100 %), altered bowel habits (51%), and diarrhoea (54%). There was no difference in the prevalence of IBS in Karachi and Baloch Colony as compared to Bahawalpur and Tibba Badar Sher. IBS patients seeking health care advice were 17.6 % as compared to 12.6 % non healthcare seekers. Of the healthcare seekers there were 29 (35.4 %) males (p=0.002). The overall mean age of health care seeking IBS patients was 32.8 ±13.8 years (p<0.001). All IBS patients seeking healthcare advice had abdominal pain (p<0.001), while 61% had altered stool consistency (p< 0.001) and 46% had stool frequency (p< 0.001) as compared to IBS non healthcare seekers.

Conclusion: IBS is seen in both urban and suburban communities. Health seeking behaviour is common in males and with abdominal pain. (JPMA 57:285;2007).

Introduction

Functional disorders of gastrointestinal tract including irritable bowel syndrome (IBS) is seen in approximately 15%-20% of the world population.[1] The prevalence of IBS among Western populations varies between 17 and 22%. It is a gastrointestinal disorder manifested by abdominal pain and alteration in bowel habits with several additional symptoms. Manning and the Rome criteria made it possible to make a positive diagnosis of IBS rather than by exclusion. IBS is common in the communities and accounts for 5% or more of attendances to general practitioners and 25-50% of referrals to gastroenterologists.[2] Most people with symptoms compatible with IBS do not seek health care.

Pakistani cities are diverse in nature with urban and suburban population in close vicinity to each other. Over one-third of the total population is considered to be poor, and one-sixth of the poor people dwell in urban areas.[3] This diversity has arisen due to rural-to-urban migration following limited opportunities for economic advancement in rural areas. There is lack of health and sanitation facilities in these suburban pockets. Rural-to-urban migration has led to cropping up of Katchi Abadis throughout the urban scene in the country.[4] The term "Katchi Abadi" and squatter settlement" are interchangeably used in Pakistan because of temporary nature of these neighbourhoods. They range from clusters of Huts strung along the flood drains and rail tracks to rectangular blocks of semi-permanent homes apparently laid out with considerable preplanning and deliberation.[4] While the former conform to the conventional image of squatter's abodes, the latter are almost indistinguishable from new indigenous communities. The aim of this observational study was to compare the frequency and distribution of IBS in urban and suburban communities.

Subjects and Methods

A standardized self-reporting questionnaire based on Rome II criteria[5] for the diagnosis of IBS was filled by adults belonging to an urban and suburban population attending the primary care clinics in Karachi and Bahawalpur from June 2002-June 2005. Karachi is the capital city of Sindh, and the largest city of Pakistan. Katchi Abadis occupy 303 kilometers or 16.8% while their resident population is estimated to be 37% of the metropolis' entire population.[6] The city Bahawalpur is spread over an area of 24,830 square kilometers. According to 1998 Population and Housing Census, total population of Bahawalpur district is 2433 thousands persons.[7] The subjects were informed about the aim of the study and only those who volunteered were enrolled. Individuals over the age of 16

years from the adjacent areas of the primary care service were randomly selected. A total of 1167 persons were invited to fill out a questionnaire of whom 1048 (90%) completed the questionnaire. These individuals belonged to both the cities and their katchi abadis representing an urban and suburban population. The questionnaire evaluated demographic characteristics, general, upper and lower gastrointestinal (GI) symptoms comprising items from the Rome II criteria. Other aspects of inquiry also included health seeking behavior of the subjects.

Statistical analysis

The questions were coded for analysis and data handling. Comparison between groups was assessed using the chi-squared test and Fischer's exact test with the measure of association quoted as odds ratio (OR) with a 95 % confidence interval (CI). Independent sample t-test was used to compare the mean among two groups. All p values were two sided, p-value less than 0.05 was considered statistically significant. Data were analyzed by using statistical package for social science (SPSS) version 11.5.

Results

Sociodemographic characteristics: Of the 1048 people aged ≥ 16years, 575 were males and 473 were females (Table). Overall 44 % (457) were students, 15 % (154) employed and 12% (124) were labourers, 12% (123) housewives and 10% (109) business and 7 % (81) physicians. According to the criteria 55% (576) were IBS negative, whose mean age was 27.8 ± 10.6 years .The age range of IBS positive 45 % (472) cases ranged from 16-85 years with a mean of 31 ± 13 years. About 61% of IBS patients (289/472) were in the age group 16-30 years with a mean age of 22.7±3.7 followed by 25% (120/472) in the age group 31-45 years with a mean age of 37.9 ± 4years. Of the IBS patients 58% (275/472) were males and 42% (197/472) females. IBS was significantly (p= 0.047) more common in males in the age group16-30 years

Symptoms: Abdominal pain was present in all (472/472) patients followed by altered frequency of bowel habbits in 47% (224) IBS positive cases as compared to 7.5% (43) IBS negative cases, diarrhoea was seen in 47% (224) IBS positive as compared to 16% (92) IBS negative cases passage of mucous was reported by 38% (181) in IBS positive as compared to 11% (61) IBS negative and bloating was seen in 47% (223) IBS positive as compared to 14% (81) IBS negative. All the differences were significant (p<0.001).

Comparison between communities - Karachi vs Baloch Colony: The number of IBS positive cases in Karachi were 41% (118/288) as compared to 37% (77/209) in Baloch C colony (p=0.352). The mean age of these patients were 25.4 ± 8.9 years compared to 31 14.2 years, respectively (p=0.002). The gender distribution of IBS positive cases in Karachi were males 67% (79/118) and females 33% (39/118) compared to 53% (41/77) and 47% (36/77) respectively in Baloch colony (p=0.07).

Table. Ddemographic characteristics of studied population.

Factors	IBS		P-value
	Positive (n = 472)	Negative (n = 576)	
Gender			
Male	275 (48%)	300 (52%)	0.045
Female	197 (42%)	276 (58%)	
Age (in years)	31.1 ± 13.0	27.8 ± 10.6	< 0.001
Communities			
Karachi	118 (41%)	170 (59%)	0..352
Baloch Colony	77 (37%)	132 (63%)	
Bahawalpur	245 (63%)	144 (37%)	< 0.001
Tibba Badar Sher	32 (20%)	130 (80%)	

Bahawalpur vs Tibba Badar Sher: The number of IBS positive cases in Bahawalpur were 63% (245/389) as compared to 20% (32/162) in Tibba Badar Sher (p<0.001). The mean age of these patients were 34.6 ± 13.2 years compared to 25 ± 7.2 years respectively (p<0.001). The gender distribution of IBS positive cases in Bahawalpur were males 61% (149/245) and females 39% (96/245) compared to 19% (6/32) and 81% (26/32) respectively, in Tibba Badar Sher (p<0 .001).

Health Care Seeking Behavior: Healthcare advice was seeked by 26% (272/1048). IBS patients seeking health care advice were 60 % (163/272) as compared to 40 % (109/272) who were IBS negative. Healthcare seekers among IBS patients included 56 % (92/163) males with a mean age of 32 ± 13.4 years and females 44 % (71/163) with a mean age of 31 ± 14.3 years. IBS negative healthcare seekers were 52 % (57/109) males with a mean age of 31 ± 11.8 years and 48 % (52/109) females with a mean age of 24 ± 6.8 years. All IBS positive patients seeking healthcare advice had abdominal pain (163/163) p<0.001, 61% had altered stool consistency (99/163) and altered stool frequency was seen in 46 % (75/163) when compared to non healthcare seekers. All the differences were statistically significant

Discussion

Irritable bowel syndrome is seen in all the societies and races and also in both genders. The quality of life of patients with IBS decreases as low as that of patients with diabetes mellitus.[8] Functional GI disorders are common in the general population; however, their impact on health

status and health resource use in Pakistan has not been examined. In Pakistan during 1998-99 and 2000-01, the rural poverty increased by 4.3 percentage points. Increase in urban poverty during the same period was 1.8 percentage points.[5] The implications of this study are that health care seeking behaviour was predominantly seen in males coming forth with their symptoms to their physicians for relief of symptoms. This is consistent with our own previous observation[9] and regional studies from India and Ceylon demonstrating similar tendency for males.[10-11] It is in contrast to the West where more women than men consult specialist clinics for IBS.[12] It was noted that both males and females IBS positive patients with health seeking behaviour had similar mean ages of 31 years. Recurrent abdominal pain and other symptoms of IBS were commonly noted and frequently resulted in the utilization of health care facilities. In IBS pain severity plays a more prominent role, but anxiety, depression and fear of cancer are also important factors contributing to the decision to consult.[12] On comparison of the urban and suburban communities in Karachi-Baloch colony and Bahawalpur- Tibba Badar Sher, there was no difference in the prevalence of IBS in Karachi-BC Colony as compared to Bahawalpur-Tibba Badar Sher. The number of IBS positive patient's in Bahawalpur city were greater in number as compared to Tibba Badar Sher. This is surprising as inhabitants of the suburban communities tend to have a life style similar to one maintained by the urban community. It appears not to be the case in Bahawalpur- Tibba Badar Sher. It is possible that patients from Tibba Badar Sher though few were maintaining a lifestyle of the rural community, as explained by the fact that break-up of the rural and urban population in Bahawalpur is 72.7 % and 27.3 %, respectively.[6] In a previous study in the region where urban community was compared to the rural community no difference was found in the prevalence of the IBS.[13] However, in another study there was a higher prevalence rate of IBS in Beijing city 10.5 % than in rural areas 6 % by stratified analysis ($P < 0.001$).[14] Our results are not in complete agreement with studies reporting higher prevalence of IBS in urban compared to rural regions with widespread high socio-cultural classes.[14] The higher prevalence of common infections associated with inadequate water and sewage system in suburban communities may predispose to bacterial gastroenteritis which is known to precede the development of IBS in many patients.[15] Also, psychological distress is linked to having persistent gastrointestinal symptoms and frequently seeking healthcare for them over time.[16] In conclusion IBS is frequently seen in different communities. Health seeking behavior was predominant in males with abdominal pain and altered bowel habit.

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