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Frequency Of Irritable Bowel Syndrome in Post Graduate Residents in Hayatabad Medical Complex, Peshawar

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Irritable bowel syndrome is a functional disorder of gastrointestinal tract associated with variety of symptoms like abdomen pain or change in bowel habits. the aim of current study was to determine the frequency of irritable bowel syndrome in Postgraduate residents of Hayatabad Medical Complex Peshawar Pakistan. A total of 160 postgraduate residents were included after informed consent. A detailed history was taken, and any possible organic disease is ruled out on examination in the participants. Data of doctors fulfilling the inclusion criteria were entered into preformed pro-forma. IBS was diagnosed by ROME IV criteria. Data was analyzed with SPSS 14. Mean was calculated for quantitative variables like age and duration of residency in years. Frequencies and percentages were measured for qualitative variables like gender. In this study 160 doctors were included, and mean age of postgraduate residents was 30 years ± 8.28. 60% of postgraduate residents were male while 40% were female. The frequency of irritable bowel syndrome was found to be 19% in postgraduate residents in Hayatabad Medical Complex. 60% male PGs had IBS and 63.3% had training less than 2years. Our study concludes that the frequency of irritable bowel syndrome was 19% in postgraduate residents in Hayatabad Medical Complex.

Keywords: Irritable Bowel Syndrome; Postgraduate residents

INTRODUCTION

Irritable bowel syndrome (IBS) is a functional disorder of gastrointestinal tract associated with variety of symptoms like abdomen pain or altered bowel habits. IBS is commonly diagnosed by medical practitioners.1 IBS is diagnosed by ROME IV criteria which suggests frequent symptoms of abdominal pain related to defecation which lasts for a day in a week for 3 months and any two or more following associated factors, I) Change in frequency of stools, II) Abdomen pain associated with defecation, III) Related with change in the stool's form2. Pathophysiology of IBS is not known exactly but changes in gut motility, disturbance of gut microbiota, psychological stress, changes in enteric nervous system and visceral hypersensitivity are considered to cause IBS 3.

Globally IBS effects 03-22% population while its prevalence is high in west (22%) than in Asia (2.9-15.6%) 4. In United States of America (USA), approximately 2.4 to 3.5 million health professionals per year visit to the hospital for IBS treatment. IBS is most frequently reported health condition by the physicians i.e., 12%, in which 60-65% are female population 5. One study conducted in college students of Karachi showed 34% prevalence of IBS while another study in Bahawalpur and Karachi had shown 45% prevalence of IBS 6. Similarly, study conducted in Saudi Arabia shows 31.8% prevalence of IBS. A study conducted in a medical college of Karachi shows 28.3% while another study conducted in agha khan university shows 26% prevalence of IBS in medical students 7. Emotional stress associated with IBS is 40.1% and it was common in those students who lived alone or with friends than those who lived with families and also IBS was common in those whose parents were divorced, who had chronic health issues and those with food hypersensitivity 8,9.

Medical profession has multiple stresses in a person's life. Postgraduate training is a time in which trainees face multiple challenges and stresses in professional life which results in psychological issues and conditions like IBS. Due to increasing competition in professional life, post-graduate trainees have to face more challenges and stresses. The aim of current study was to get local data on prevalence of IBS in post-graduate trainee medical officers in Hayatabad Medical Complex, Peshawar.

MATERIAL & METHODS

This study was conducted in Gastroenterology Department of Hayatabad Medical Complex, Peshawar after approval from hospitals research and ethical board. It was a descriptive (cross sectional) study conducted from June 2018 to December 2018. A total of 160 postgraduate residents of Hayatabad Medical Complex meeting the inclusion criteria i.e., patients of IBS, were included and those having any diagnosed organic gastrointestinal disorder were excluded from the study. Written informed consent was taken from all participants. The purpose and benefits of the study was explained to the participants, and they were assured about the confidentiality of the data. A detailed history was taken, and clinical examination was done to rule out any possible organic

disease in the participants. Data was entered into preformed proforma. Other modifiers like age, sex, duration of the training, status of residence i.e., day-scholar or boarder were also be recorded. IBS was diagnosed by ROME IV criteria. All data collected was entered in SPSS version 14. Data comprises of Quantitative variables i.e., age and duration of residency in years, and categorical variables i.e., gender and presence of IBS. Descriptive statistics mean ± standard deviation was calculated for quantitative variables like age and duration of residency in years. Frequencies and percentages were measured for qualitative variables like gender and presence of IBS. IBS was stratified among age, gender, duration of residency in years and current status of residence (day-scholars or boarders) to see the effect modifications. Chi square test was applied for analysis taking p-value of equal to or less than 0.05 as significant.

RESULTS

In this study, 160 postgraduate residents were analyzed. Age range of sample was 25-45 years. Mean age was 30 years ± 8.28 years. Majority participants were males i.e., 96 (60%). Mean duration of training was 2 years ± 2.16 while 104 (65%) had training > 2 years and 56 (35%) had training less than or equal to 2 years. Most of the participants were living in hostels 107(67%). The Prevalence of IBS in postgraduate medical trainees was found as 19%. Association of demographic features and IBS is summarized in **Table 1**. Age and gender were not found to be significantly associated with IBS while duration of training and living situation were significantly associated with IBS (*p*-value: 0.000019 and 0.00001).

Variables	Number of Cases (n=160)		Cases of IBS (n=30)	Cases of IBS (n=130)	*p*-value	χ^2
Gender	Males	96 (60%)	18(15.7%)	78(68.4%)	.856	0.0325
	Females	64 (40%)	12(18.8%)	52(81.25%)		
Age	25-35 years	109(68%)	20(18.3%)	89(81.6)	0.883	0.021
	36-45 years	51(32%)	10(19.6%)	41(80.3)		
Years of Training	≤ 2 years	56(35%)	19(33.9%)	37(66.07)	**0.00019**	13.87
	> 2 years	104(65%)	11(10.5%)	93(89.4)		
Residence	Home	107(67%)	10(9.3%)	(90.6)	**0.00001**	21.805
	Hostel	53(33%)	20(37.7%)	(62.2)		

Table 1: Demographics and Statistical Analysis of Data

DISCUSSION

In our study prevalence of IBS in postgraduate trainee medical officers is 19%. A study conducted in Saudi Arabia shows IBS prevalence in doctors is 16.3%10 while a similar study conducted in Korea shows 17.1% prevalence of IBS among doctors 11, so these results are not very different from our study. Many studies conducted to find the associated factors with IBS show stressful lifestyle leads to development of IBS. Medical profession is a stressful field and doctors face many challenges in daily life, have long duty hours and night shifts and sleep deprivation due to job nature so they are more prone to functional gastrointestinal problems like IBS 12. Prevalence of IBS in males is 15.7% in our study and in females is 18.8% but there is no statistically significant difference in IBS in both genders. Most of study conducted show high prevalence of IBS in females than males. A study conducted by Naeem and colleagues in Karachi show IBS prevalence of 14.7% in males and 85.29% in females 1. Another study showed similar results of IBS prevalence in 25.2% males and in 41.5% females 13. A study conducted by Jafri et al. shows IBS as 36% in males and 32% in females 14, while a study conducted in Peshawar shows same incidence of IBS among male and female students 36.9% 15. These results are similar to our results.

Our study found no significant difference in prevalence of IBS in different age groups. A Study conducted by Kewin et al. show high prevalence of IBS 27.7% in 21-30 years age 17. As per study conducted on nurses in Saudi Arabia, the prevalence of IBS was 14% in participants of age more than 30 years and 15.2% in less than 30 years age 18. In our study, prevalence of IBS was high in those who lived in hostels than who lived with their families at home i.e., 37.7% vs 9.3%. A study conducted by Costanian et al. show IBS is high among students who live in hostels and away from families (OR = 2.84; 95%CI: 1.94-4.16)16. Living away from family results in poor stress management and due to lack of support and unhealthy eating habits causes gastrointestinal problems such as IBS.

In our study, the prevalence of IBS was high in those postgraduate residents whose training was less than 2 years (33.9%) than those who had training for more than two years (10.5%). This could be because when trainees join the training, they have to cope with multiple challenges in professional life, as the training responsibilities increases and they have more stress to adjust in new environment and also have to cope with stressful duty hours, sleep deprivation, disturbed eating habits and hectic duty hours leads to IBS.

CONCLUSION

Our study concluded that the frequency of irritable bowel syndrome was 19% in postgraduate residents in Hayatabad Medical Complex**.** Long duty hours, early training years, exam stress, living away from family, leads to increased frequency of IBS.

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