FREQUENCY OF GIT DISORDERS AMONG MEDICAL STUDENTS AT NISHTAR MEDICAL UNIVERSITY, MULTAN

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ABSTRACT

Background: Gastrointestinal disorders are one of the most common health problems in the community and are influenced by many factors. **Objective:** To determine the frequency of Gastrointestinal disorders in 1st year and Final year MBBS students of Nishtar Medical University, Multan. **Material and Methodology:** Cross-sectional observational study of 120 students was done at Nishtar Medical University, Multan with their informed consent. A questionnaire was designed and data collected in 5 days. Data was analyzed by Microsoft Excel Version 2013. **Results:** A total of 120 student surveyed out of which 117 were valid, 56 of 1st year MBBS and 61 of Final year MBBS, 60 (51.2%) male and 57 (48.8%) females. The percentage of GIT disorders in 1st year MBBS students and in Final year MBBS students was 69.6% (39/56) and 91.8% (56/61) respectively. The prevalence of GIT disorders among students residing in hostel and among Day scholars was 85.5% (65/76) and 73.2% (30/41) respectively. **Conclusion:** The frequency of GIT disorders was greater in Final year MBBS students as compared to 1st year MBBS Students. Stress, smoking, poor kitchen hygiene, irregular meals, and low vegetable consumption were observed as most significant correlates. Key Words: GIT disorders, MBBS students, hygiene, stress, smoking, diarrhea, constipation, heartburn.

INTRODUCTION

Gastrointestinal disorders or diseases refer to the diseases involving the gastrointestinal tract, namely the esophagus, stomach, small intestine, large intestine, and rectum and the accessory organs of the digestion, the liver, gallbladder, and pancreas. Gastrointestinal symptoms such as heartburn, indigestion/dyspepsia, bloating and constipation are common in the community. However these symptoms may be misinterpreted and their impact and significance misunderstood both by healthcare providers, patients and medical students. Gastrointestinal disorders include such conditions as constipation, irritable bowel syndrome, heart burn, diarrhea, ulcers, esophagitis, hemorrhoids, anal fissures, perianal abscesses, perianal infections, diverticular diseases, colitis, colon polyps and cancer. Many of these diseases can be prevented or minimized by maintaining a healthy lifestyle and practicing good bowel habits. Functional disorders are those in which the GI tract looks normal but doesn't work properly. They are the most common problems affecting the GI tract. Constipation and IBS are two common examples[1]. Many factors upset the GI tract and its motility (or ability to keep moving), including:

Eating a diet low in fiber, example only rice and meat and no vegetables.
Not enough exercise
Traveling or other changes in routine and eating habits
Eating large amounts of dairy products
Stress
Smoking
Consuming unhealthy food from unhygienic sources
Poor personal hygiene

Constipation means it is hard to have a bowel movement (or pass stools), they are infrequent(less than three times a week) or incomplete. It is usually caused by inadequate fiber in diet or a disruption of regular routine or diet. Diarrhea is defined as the passage of loose, liquid or watery stools. These liquid stools are passed more than three times a day. Heartburn is a feeling of burning in your chest and is a symptom of acid reflux or GERD. In digestive system an ulcer is an area of open sores where tissue has been destroyed by gastric juices and stomach acid. Esophagitis is any irritation or inflammation of esophagus. Irritable Bowel Syndrome is a condition is which the colon muscle contracts more often than in normal people. The GIT disorders are common in medical students as well and there occurrence is influenced by many factors and habits which change

over the course of the years of study they have in medical university. Our research is to study the frequency of GIT disorders among 1st year and Final year MBBS students and compare it with their eating habits, lifestyle and food preferences.

OBJECTIVE

To determine the frequency of GIT disorders in 1st year and Final year MBBS students and compare it with their eating habits, preferences, and lifestyle.

MATERIALS AND METHODOLOGY

Study Design: Descriptive Cross-sectional study. Duration of study: 20 days (30th January 2017 to 18th February 2017). Study Population: 1st year and Final year MBBS students of Nishtar Medical University, Multan. Study Area: Nishtar Medical University, Multan. Sampling Technique: Non-probability convenient sampling. Inclusion Criteria: 1st year and Final year MBBS students of NMU, Multan. Exclusion Criteria: Non-medical and other students at NMU, Multan. Sample size: 120 Students. Data Collection Procedure: A self-designed questionnaire was used to carry out survey after informed consent. Data Analysis: Microsoft Excel 2013.

RESULTS

The percentage of gastrointestinal disorders in First year MBBS was found to be 69.6% (39/56) and in Final year MBBS was 91.8% (56/61). There were more cases of diarrhea in final year (23/56) as compared to 1st year MBBS (16/36). The percentage of GIT disorders in different age groups was, 77.2% in 16-18, 71.4% in 18-20, 81.5% in 20-22 and 91.9% in 22-24 with highest cases of diarrhea (11/22) in the 20-22age group. The prevalence of GIT disorders in males was 85% and in females was 76.8% with more cases of heart burn and diarrhea in both genders. The proportion of GIT disorders in Hostelites and Day scholars was 65/76 (85.5%) and 30/41(73.2%) with more cases of Diarrhea

(28), Heartburn (20), and Constipation (11) in Hostelites. The percentage of GIT disorders in people eating food from different food sources was 76 % for Home-made food, 100% for food from restaurants, and 83.3% for food from mess with diarrhea and heartburn being the commonest disorders in mess food. The prevalence of GIT disorders in people preferring spicy food was 83.1% (74/89) and non-spicy food was 75% (21/28) with diarrhea (30), heartburn (21) and constipation (16) being the most common in people preferring spicy food. The ratio of GIT disorders for different types of food was 86% for rice, 75% for vegetables, and 85.7% for meat. Smokers showed percentage of 94.4% while nonsmokers had 80% disorders. People who had food regularly had a percentage of 71.4% while those who had meals at irregular times had a percentage of 87% disorders. The percentage of GIT disorders on the status of hygiene was found to be 100% for dirty kitchen, 82.5% for clean kitchen and 71.4% for very clean kitchen.

Table No.1: Percentage of GIT disorders in First year and Final year MBBS Students.

	First Year MBBS	Final Year MBBS
% of GIT Disorders	69.6	91.89

Table No.2: Frequency of GIT Disorders in First year and Final year MBBS Students.

	First year	Final year
No disorder	17	5
Heartburn	13	15
Ulcer	2	1
Diarrhea	15	23
Constipation	7	12
Esophagitis	1	0
IBS	0	3
Any other	1	2

Table No.3: Frequency of GIT disorders among different age groups.

	AGE GROUP 16-18	AGE GROUP 18-20	AGE GROUP 20-22		AGE GROUP 22-24
No disorder	5	10		5	3
Heartburn	5	8		7	9
Ulcer	0	2		0	1
Diarrhea	5	10		11	12
Constipation	2	4		4	8
Esophagitis	0	1		0	0
IBS	0	0		0	3
Any other	1	0		0	1
% of Disorders	72.2	71.4		81.5	91.9

Table No.4: GIT Disorders in Males and Females of First year and Final year MBBS students.

	No. of Disorders in Males	No. of Disorders in Females	
No disorder	9		13
Heartburn	17		11
Ulcer	3		1
Diarrhea	21		17
Constipation	8		9
Esophagitis	0		1
IBS	2		1
Any other	0		3
% of GIT			
Disorders	85		76.8

Table No.5: Frequency of GIT Disorders in Hostelites and Day Scholars.

	Hostelites	Day Scholars
No disorder	11	11
Heartburn	20	8
Ulcer	2	1
Diarrhea	28	10
Constipation	11	8
Esophagitis	1	0
IBS	1	2
Any other	2	1
% of		
Disorders	85.5	73.2

Table No.6: Frequency of GIT disorders in different socioeconomic classes of students of 1st and final year of MBBS.

	Upper Class	Middle Class	Lower Class
No disorder	2	18	1
Heartburn	2	27	0
Ulcer	0	3	0
Diarrhea	5	32	1
Constipation	3	16	0
Esophagitis	0	0	0
IBS	1	2	2
Any other	0	3	0
% of			
Disorders	84.6	82.2	75.0

Table No.7: Frequency of GIT Disorders in 1st year and final year MBBS Students based on different sources of food.

	Home-made	Mess	Hotel
No disorder	12	10	0
Heartburn	11	16	1
Ulcer	1	2	0
Diarrhea	13	23	3
Constipation	10	7	4
Esophagitis	0	1	0
IBS	1	0	0
Any other	2	1	0
No. of Disorders	50	60	8
% of GIT			
Disorders	76	83.3	100

Table no. 8: Effect of Spices in food on frequency of GIT Disorders in 1st year and Final year MBBS Students.

	Spicy food	Not Spicy Food
No disorder	15	7
Heartburn	21	7
Ulcer	3	0
Diarrhea	30	8
Constipation	16	3
Esophagitis	1	0
IBS	2	1
Any other	1	2
% of GIT Disorders	83.1	75.0

Table No.9: Frequency of GIT disorders based on type of food intake in 1st year and final year MBBS Students.

	Food type Rice	Food type Vegetable	Food type Meat
No disorder	8	11	6
Heartburn	12	16	9
Ulcer	2	1	1
Diarrhea	22	15	14
Constipation	13	7	9
Esophagitis	0	0	1
IBS	1	2	2
Any other	0	2	0
GIT disorders	50	43	36
Total	58	54	42
%Disorders	86.2	79.6	85.7

Table No.10: Effect of Stress on the Frequency of GIT disorders in 1st year and final year MBBS students.

	Stress	No Stress
No disorder	6	16
Heartburn	10	18
Ulcer	2	1
Diarrhea	12	24
Constipation	7	13
Esophagitis	1	0
IBS	1	0
Any other	3	0
Total GIT disorders	36	56
Total Cases	42	72
%Disorders	85.7	77.8

Table No.11: Frequency of GIT Disorders in smoker and non-smokers in first year and final year MBBS Students.

	Smokers	Non Smokers
No disorder	1	20
Heartburn	3	26
Ulcer	2	1
Diarrhea	2	35
Constipation	6	13
Esophagitis	1	0
IBS	3	2
Any other	0	3
% Disorders	94	80

Table No.12: Frequency of GIT disorders based on regular meal consumption in 1st year and Final year MBBS Students.

	Regular Meals	Irregular Meals
No disorder	16	7
Heartburn	9	17
Ulcer	1	2
Diarrhea	19	18
Constipation	8	8
Esophagitis	0	1
IBS	1	0
Any other	2	1
% Disorders	71.4	87.0

Table No.13: Frequency of GIT Disorders in 1st year and Final year MBBS students, based on hygienic status of the kitchen.

	Dirty Kitchen	Clean Kitchen	Very Clean Kitchen
No disorder	0	14	8
Heartburn	5	19	5
Ulcer	0	2	1
Diarrhea	3	28	7
Constipation	2	12	5
Esophagitis	0	1	0
IBS	0	2	1
Any other	0	2	1
% Disorders	100	82.5	71.42857143

DISCUSSION

Our study was equated with other studies conducted worldwide and in Pakistan as well.

A cross-sectional study was conducted at Dow Medical College, Karachi in 2010 with the objective of assessing the frequency of GERD in students of medical college. Out of 595 students interviewed 444(74.6%) were females. Majority of them aged between 17-25 years.

Abdominal discomfort was found in 288 students (48.4%) out of which 132 students (22.18%) also complained of heartburn. Dysphagia was present in 88 students (14.8%). Overall 109 students (18.3%) exhibited breathing problems. The study concluded that the percentage of students having weekly episodes of heartburn was significantly higher than that in general Asian population[2] A study was conducted in the medical school of Brasilia with the purpose to assess the frequency patterns of 8 digestive symptoms and related

features, with regard to functional disorders in young adults. A sample of 279 subjects was taken. 20% to 27% subjects reported more than 6 episodes of one or more of the following symptoms within a 12 month period: indigestion, distention, constipation, heartburn, abdominal pain and diarrhea. A higher prevalence of constipation in women was a significant (p < 0.05) difference between sexes. Dyspepsia and IBS were identified by clinical criteria in 25% and 9% subjects respectively.[3]

An observational case control study was carried out in Karachi in 2012 to assess the prevalence and pattern of anxiety among medical students of Karachi. Random sampling was done a sample of 360 medical students was selected from 3 different medical colleges of Karachi. The prevalence of IBS was found to be 28.3% with a predominance of females 85% (87) over males 14.71%. The psychological symptoms of anxiety were encountered in 57 (55.8%) participants with IBS.[4] A cross sectional study was conducted by students of MAMC, New Delhi from January to March 2014 with the aim of estimating the prevalence, socio-demographic and lifestyle associates risk factors of Dyspepsia and IBS among medical college students of urban Delhi and Northern India. A sample of 200 subjects was selected, out of which 90 (45%) were males and 110 (55%) males with a mean age of 20.43±1.05 y. The prevalence of dyspepsia was 18% and while that of IBS was 16.5%. Consumption of fatty food, cigarettes and low physical activity were observed as most significant correlates.[5]

A cross sectional study was conducted by Aga Khan University, Karachi and Quaid-eAzam Medical College, Bahawalpur from 2001 to 2004 with the aim to investigate the prevalence of IBS in college students and compare its distribution in the non-medical college and medical college students. Data was collected from 508 students with males 220 (43%) and females 288 (57%) and mean age 22±2.8 y. The overall prevalence of IBS among college students was 171/508 (34%). There were 107/263 (41%) non-medical college students and 64/245 (26%) medical college students. Abdominal Pain was present in 100 % (171/171) with altered frequency of stools in 58% (100/171) (p<0.001) of students with IBS. The medical advice was sought by 38% (65/171) in IBS group with 46 % (30/65) non-medical college students and 54% (35/65) medical college students(p=0.001)[6]

CONCLUSION
The frequency and percentage of gastrointestinal disorders (heart burn, diarrhea, constipation, etc.) was greater in Final year MBBS students as compared to 1st year MBBS students particularly diarrhea and constipation. The percentage of GIT disorders increased with increasing age. There were more cases in males in contrast to females particularly of heartburn but constipation was equal in both genders. The ratio of GIT disorders, especially diarrhea and heart burn was strikingly high in students residing in hostels as

compared to day scholars and more cases of diarrhea were seen and GIT disorders as a whole in students consuming food from mess or hotels as compared to home. There were more cases of heart burn, diarrhea and constipation in people who preferred eating spicy food, and more cases GIT disorders were seen in students preferring rice or meat over vegetables. The students who were more stressed showed more fractions of disorders as compared to students who enjoyed a stress free life. The percentage of GIT disorders among smokers and non-smoker students showed a great disparity with larger proportion in smokers. More percentage of GIT disorders particularly heart burn was seen in people consuming meals at irregular time. The percentage of GIT disorders showed an inverse relationship with the hygienic status of the kitchen with more cases in dirty kitchen and lesser in clean kitchen.

LIMITATIONS
Students were unenthusiastic to fill out the questionnaire, as they were not familiar with such activities particularly the 1st year students. Some students were reluctant to information about some questions (smoking, stress level, eating habits and preferences, hygienic condition of kitchen etc.) and so filled them out randomly. A few students particularly from Final year MBBS did not take it seriously and gave false information. The source of food was not adequately compared for Hostelites as there are multiple messes working in the hostels. Many students of First year MBBS were not aware of the name and meaning of the diseases that were asked in the questionnaire for example Heart burn, esophagitis, IBS etc. and hence may have ignored them. The personal hygiene status was not accounted for in the study for each individual student.

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