Upper Functional Gastrointestinal Disorders in Young Adults

Peyman Adibi¹, Ebrahim Behzad², Mohammad Shafieeyan², Ali Toghiani³
Integrative Functional Gastroenterology Research Center, Isfahan University of Medical Sciences, Isfahan, Iran²
Isfahan University of Medical Sciences, Isfahan, Iran²
Islamic Azad University, Najafabad Branch, Isfahan, Iran³

Background: Functional Gastrointestinal disorders (FGID) are common disorders in gastroenterology which are common in young adults. The aim of this study is evaluating the prevalence of upper FGID in iranian young adults. Methods and Material: This was a cross-sectional study which was on 995 persons who were going to marry. A ROME III based questionnaire was used to determine the frequency of upper GI Syndromes among the sample population. Results: Our results determined 74 subjects had functional dyspepsia (36 subjects diagnosed as postprandial distress syndrome patient and Epigastric pain syndrome was seen in 38 subjects). Functional heartburn was diagnosed in 52 participants. Globus was seen in 35 subjects and 41 had unspecified excessive belching. Discussion: Many epidemiologic studies were done all around the world but there are different reports about prevalence and incidence of FGIDs. Our results were agreed with reported prevalence of FGIDs in Iran in adults. And our findings were agreed with some other Asian studies. Key words: Prevalence, Dyspepsia, Heartburn, Iran.

1. INTRODUCTION
Functional Gastrointestinal disorders (FGID) are common disorders in gastroenterology that could be seen in any segment of gastrointestinal tract from esophagus to rectum. Functional gastrointestinal disorders are not explained entirely with current biochemical or structural investigations. ROME III criteria is FGID diagnostic criteria which is classified into six subcategories based on five anatomical regions: esophageal, gastroduodenal, bowel, functional abdominal pain, Functional gallbladder and Sphincter of Oddi Disorders, anorectal (1, 2, 3, 4).

There are completely different reports about epidemiology of FGIDs. For example the incidence of gastro-esophageal reflux was reported from 0.05 to 4.3 %, 0.8 to 10.3% for dyspepsia and from 0.2 to 10 % for IBS (5-6). The etiology of functional gastrointestinal disorders is unknown but some studies had reported some risk factors such as psychological factors or abdominopelvic interventions. These risk factors could aggravate or change severity and frequency of symptoms (7, 8, 9).

Because gastrointestinal disorders place great psychological and economic burden on society and the health system, detecting and screening in high risk populations could be useful for decreasing burden of disease (10, 11).

This study was designed to determine the prevalence of upper functional gastrointestinal disorders.

2. METHODS AND MATERIALS
This was a cross-sectional study which was done in Isfahan. Target population was Isfahanian who were going to marry, coming to the Molla-Hadi Sabzevari (MHS) Care Center for receiving premarriage education and screening tests. MHS Center is the only premarriage screening center in Isfahan, On the other hand, attending there and getting premarriage educations and screening tests is necessary for every one going to marry and is a prerequisite for marriage registration and documentation, so almost all of the couples should join their educational classes. Because of this, the center was chosen as our site of sampling. The ethics committee of Isfahan University of Medical Sciences approved the study.

Sampling was done in a convenience non-probability method till the determined sample size was obtained. We had used a self-administered questionnaire about upper GI symptoms according to ROME III criteria.

Designed questionnaire was assessed by two faculty members of internal medicine department on Isfahan University of medical sciences and then it was filled by 20 persons and ambiguous questions were modified. Then modified questionnaire was translated to English by a native and new English questionnaire was compared with original questionnaire.

To determine the frequency of upper GI Syndromes among the sample population, some of the questions in the questionnaire were matched to the

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diagnostic criteria defined in Rome Criteria for functional GI disorders. It was necessary to determine subjects who had the symptoms long enough to fulfill the criteria, for this reason only the answers “often” and “always” were taken as favorable answers.

Information were entered the SPSS software (SPSS Inc., Chicago, IL) and analyzed on the basis of relative frequency of symptoms and also upper GI syndromes according to the ROME criteria. In all statistical tests two-sided p values of less than 0.05 were considered as statistically significant.

3. RESULTS

In this study, 995 subjects participated, of whom 520 (52.3%) were male and 475 (47.7%) female. The youngest and the oldest of them were 14 and 66 years old, respectively. The sample mean age was 23.8 and its standard deviation was 4.5.

We had 12 questions to be answered in questionnaire. The first question evaluates epigastric burning. 265 (129 M and 136 F) subjects sometimes had the sensation of epigastric burning, 25 (6 M and 18 F) often had this feeling, only one man said always. 705 participants (384 M and 321 F) never had the feeling. Next item was heartburn. 122 subjects sometimes (79 Male and 43 Female); 16 women often and 857 never had this sensation (441 M and 416 F).

337 (33.8%) subjects had told us that they sometimes had regurgitation (171 M and 166 F); 43 (4.3%) answered often (21 M and 22 F) and ten always had this feeling (3 M and 7 F). 605 (60.5%) answered never of whom 325 were male and 280 were female.

Epigastric fullness and bloating was seen in 201 participants. 165 subjects (16.6%) sometimes (92 Male and 73 Female); 33 (3.3%) often (10 M and 23 F) and 3 women always had this sensation and 794 participants (79.8%) never had this sensation in last 3 months (418 M and 376 F).

Globus sensation was reported by 207 subjects. 172 persons (17.3%) answered sometimes (95 M and 77 F). 34 persons answered often (12 Male and 22 Female), only one woman (0.1%) answered always. 788 (78.9%) had never had globus sensation (413 M and 375 F).

Our next question was evaluating epigastric pain. 189 (19%) of all subjects sometimes feel this pain in last 3 months (90 M and 96 F), 30 subjects (3%) often had the symptom (7 M and 21 F); 3 participants (0.3%) always had the symptom (1 M and 2 F) and 773 (77.7%) never had the symptom, of whom 422 were male and 356 were female.

Periumbilical pain was reported in 192 subjects. 161 (16.2%) had sometimes feel this pain (71 M and 90 F), 29 subjects (2.9%) often had the symptom, of whom 14 were male and 15 were female; 2 women (0.2%) answered and 803 persons (80.4%) never had the symptom (435 M and 368 F).

Next item was frequency of point pains in the chest. 159 of all participants (16%) sometimes had this symptom (82 M and 77 F), 27 (2.7%) said often (9 male and 18 females), a man always had this sensation and 808 subjects never had the symptom (428 males and 380 females).

Next question was about point pains in the extremities. 174 (17.5%) of all subjects sometimes had this symptom (87 M and 87 F), 37 persons (3.7%) often had these pains, of whom 17 were male and 20 were female; 8 subjects (0.8%) always had these pains, of whom one (12.5%) was male and 7 (87.5%) were female and 776 participants (77.7%) never had the symptom including 415 males and 361 female. Our next item was about point pains in other parts of the body. 158 (15.9%) subjects answered sometimes (81 M and 77 F); 29 persons (2.9%) said often, of whom (11 male and 18 female); 2 (0.2%) persons answered always, of whom all were female and 806 never had the symptom including 428 males and 378 were female.

Abdominal bloating was reported in 151 subjects. 128 (12.9%) participants sometimes had the symptom (72 M and 56 F); 21 (2.1%) of all subjects often had the symptom including 13 (61.9%) males and 8 (28.1%) females; 2 (0.2%) persons always had the symptom who all were male, and 844 subjects (84.8%) never had the symptom (433 M and 411 F).

The last question was about belching. 125 (12.6%) sometimes had the symptom in last 3 months (75 M and 50 F); 33 (3.3%) said often (14 males and 19 females); 8 (0.8%) participants always had the symptom (3 M and 5 F) and 829 (83%) of all never had belching including 428 males and 401 females. Symptoms were shown in table 1 with gender separation.

According to the Rome III Criteria explained above, 74 all subjects (22 M and 52 F) (7.4%) had symptoms fulfilling these criteria making the diagnosis of functional dyspepsia (of course, any
structural disease should be ruled out). Functional dyspepsia consists of 2 separate syndromes: postprandial distress syndrome and epigastric pain syndrome. 36 (3.6%) of all subjects diagnosed as postprandial distress syndrome patient whom 11 (30.5%) were male and 25 (69.5%) were female. On the other hand, Epigastric pain syndrome was seen in 38 (3.8%) subjects of whom 11 (28.9%) were male and 27 (71.1%) were female. Functional heartburn was diagnosed in 52 (5.2%) of all subjects complained of the symptoms with whom 18 (43.9%) were male and 35 subjects of whom 12 (34.3%) were male and 25 (69.5%) were female. Globus was diagnosed in 35 subjects of whom 12 (34.3%) were male and 23 (65.7%) were female. The last one, unspecified excessive belching 41 (4.1%) persons of all subjects last one, unspecified excessive belching which was used in this study was ROME II (23). According to our findings our results presents a higher prevalence in globus, heartburn and dyspepsia. But our mean age and our diagnostic criteria was different from this study. It seems that the differences in the prevalence of upper functional gastrointestinal disorders in different populations may be influenced by cultural factors and medications availability. However, lesser prevalence of upper functional gastrointestinal disorders presented in our young study population needs further consideration.

Conflict of interest: none declared.

REFERENCES