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SYMPTOMS OF DYSPEPSIA AMONG FIRST-YEAR STUDENTS IN THE REPUBLIC OF SAKHA (YAKUTIA)

DOI 10.25789/YMJ.2020.72.15

To study the symptoms of dyspepsia among first-year students of the Medical Institute there was a survey among 51 students, with an average age of 18 years, 30 of them are female, and 21 are male. The study included dyspepsia issues, its duration, nature, periodicity, frequency, seasonality, relationship with food intake and concomitant diseases of the digestive system. Symptoms of dyspepsia were determined in 33.6% of the respondents. The most common symptom of dyspepsia was a feeling of heaviness in the epigastric region, nausea, pain in the epigastric region, sometimes heartburn, nausea and belching. According to our data, functional dyspepsia is more common than organic dyspepsia, which amounted to 9.8%, possibly due to previously diagnosed diseases of the gastrointestinal tract. In the last two years, the overwhelming majority of respondents have developed symptoms of dyspepsia, which coincides with the high level of stress and psycho-emotional stress during the school period and with the adaptation of the freshman. For the prevention of symptoms of dyspepsia, the recommendations for first-year students are: regularly undergo preventive medical examinations, observe the regime and principles of rational nutrition. We have developed practical recommendations for the prevention of symptoms of dyspepsia among first-year students.

Key words: questioning, adaptation, dyspepsia, students, diseases of the gastrointestinal tract, prevention.

Introduction. The urgency of the symptom of dyspepsia is due to the high prevalence among the population and can lead to various disorders of the gastrointestinal tract and largely determine the overall health potential of students, as well as adversely affect the quality of life.

In recent years, the study of functional diseases of the gastrointestinal tract (GIT), which occurs quite often, remains relevant [2]. Interest in these diseases is associated with the high prevalence of dyspeptic complaints among the population. The modern rhythm of life, saturated with constant stress, poor ecology, improper and irrational nutrition leads to the fact that by the age of 30, every fourth person has one of the gastrointestinal diseases in his anamnesis. Dyspepsia occurs mainly at a young age, and affects mostly women [6].

The term "dyspepsia" translated from Greek as "impaired digestion". In different periods of history, this term meant different conditions. According to the modern concept, dyspepsia is called unpleasant sensations (pain, burning, bloating, a feeling of fullness after eating, a feeling of quick satiety), localized in the epigastric region. Dyspepsia is considered chronic, if symptoms bother the patient for at least 3 months. [5].

According to the latest data, the prevalence of dyspepsia syndrome is 8.5-35.5% in the general population [7] and from 2 to 5% of the total number of visits to doctors. Also, symptoms of dyspepsia are one of the most common causes of temporary disability [1].

If the causes of organic dyspepsia occur due to organic lesions of the gastrointestinal tract, the causes of functional dyspepsia have not been sufficiently studied. However, it is important to note that one of the leading etiological factors in both cases of dyspepsia is the psychoemotional factor.

Students are one of the social groups that have a high rate of gastrointestinal morbidity. This is explained by physiological characteristics, social, everyday, psycho-emotional factors and irrational nutrition of students.

By origin, dyspepsia can be secondary (organic) and functional (idiopathic). Based on the nature of the complaints, age, anamnesis data, the results of physical and general clinical research methods, the doctor must exclude, first of all, the organic nature of the symptoms of dyspepsia. Secondary dyspepsia is diagnosed in patients with organic, systemic, or metabolic diseases.

The causes of organic (secondary) dyspepsia are most often stomach and duodenal ulcers; diseases of the biliary tract; chronic pancreatitis; malignant tumors of the stomach, pancreas, colon; taking medications (non-steroidal anti-inflammatory drugs, antibiotics, theophylline, digitalis, iron, etc.); alcohol; diabetes; hyper- or hypothyroidism; hyperparathyroidism; electrolyte disturbances; diseases of the connective tissue, liver and other organic pathology. In patients with new-onset dyspepsia over the age of

45, its functional nature is unlikely; therefore, in this clinical situation, taking into account the patient's age, the physician should have a reasonable oncological alertness [3].

The prevalence of FD in different populations varies greatly, which is associated with different interpretation and severity of symptoms, different diagnostic criteria, environmental factors, local prevalence of organic diseases such as peptic ulcer, stomach cancer. In patients with PD, the quality of life is significantly reduced, which is associated with emotional distress due to persistent symptoms, treatment costs, and reduced ability to work [7].

Thus, all of the above determines the relevance of studying the selected topic and introducing some practical recommendations that can have a positive effect on the gastroenterological situation in general, and sufficiently describe and disclose this problem among students.

The purpose of study is to investigate dyspeptic symptoms and risk factors among first-year students.

Materials and research methods.

The data of the questionnaire survey of 51 students, the average age of 18 years, 30 - female and 21 - male, freshmen of the Medical Institute of NEFU named after M.K. Ammosov, Yakutsk, Republic of Sakha (Yakutia).

In the survey, we selected questions such as symptoms of dyspepsia, their duration, nature, frequency, frequency, seasonality, connection with food intake, concomitant diseases of the digestive tract. We identified the most significant for the study of the symptom of dyspepsia: a feeling of heaviness after eating, epigastric pain, heartburn, belching, nausea, vomiting and girdle pain. All students

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who participated in the survey signed an informed consent form of participation in the study.

Statistical processing of the material was carried out on a personal computer using the Statistica version 12 software package. During the statistical processing of the research results, the shares were calculated according to the frequency tables. Proportion comparisons were made using the Difference tests. The critical value of the significance level (p) was taken equal to 5%.

Results and discussion. Pain symptoms are more often localized mainly in the epigastric region (43.1%), are not seasonal (92.1%), in most cases are characterized by a moderate frequency and duration of several hours (54.9%) (table 1). By the nature of the pain, it is mainly dull (52.9%) and appears periodically (68.6%). These symptoms are diagnostic criteria for dyspepsia, which allows us to assume the presence of dyspepsia syndrome in these students. In addition to pain, the most common symptoms are nausea, sometimes heartburn, belching, and a feeling of heaviness after eating. Earlier, the students were diagnosed with gastrointestinal diseases (table 2).

90.2% of respondents have at least one of the symptoms of dyspepsia. And only 9.8% of the respondents noted the absence of any dyspeptic manifestations. Such a high frequency of dyspepsia can be explained with the characteristics of the social, emotional and psychological status and irrational nutrition of the respondents (Fig. 1), which is consistent with the literature [8].

In addition, we analyzed various symptoms and the frequency of their manifestations in the respondents (Fig. 2, Fig. 3). 31.4% of students have epigastric pain, 17.6% - girdle pain, 39.2% - belching, 45.1% - heartburn, 43.1% - nausea, 27.5% - vomiting and in 31.4% - a feeling of heaviness after eating. At the same time, pain bothered our freshmen less often than Omsk sophomores - 31.4% versus 54 (p = 0.0077), and heartburn appeared more often - 45.1% versus 23 (p = 0.0046) [4].

As seen from the pic. 2, most common symptoms are heartburn, nausea, and belching. On average, 33.6% of respondents have symptoms of dyspepsia. The number corresponds to the prevalence of dyspeptic syndrome in the population as a whole [1, 7], and according to the results of the work of other authors, among students of other universities [8].

Students most often noted the following symptoms of dyspepsia: feeling of

Table1				
Characteristics of pain symptom				
Symptom	Frequency	%	χ^2 Пирсона	p
Stomach pain:	not - 5	9.8	21.01	<0.001
	is in the epigastrium- 22	43.14		
Pain appears:	is in other areas -6	11.76	22.13	<0.001
	fasting - 12	23.53		
	after meal - 18	35.29		
	at night - 2	3.92		
Girdle pain:	pass after eating - 4	7.84	*	0.0011*
	sometimes - 9	17.65		
There was an attack of severe girdle pain:	often - 1	1.96	*	0.29*
	once - 5	9.8		
There was an attack of severe pain in the right hypochondrium:	repeatedly - 2	3.92	*	0.023*
	once - 8	15.69		
During the period of pain. they disturb:	repeatedly - 2	3.92	*	<0.0001*
	periodically - 35	68.63		
How long have you had stomach pains. heartburn. nausea	constantly - 0	0	53.5	<0.001
	0-2 years - 23	45.1		
	2-5 years - 3	5.88		
	5-10 years - 1	1.96		
Pain predominantly	Over 10 years - 2	3.92	11.54	<0.001
	sharp- 12	23.53		
Duration of pain	stupid - 27	52.94	69.63	<0.001
	few hours - 28	54.9		
	day - 5	9.8		
	a week - 1	1.96		
They give off pain	month - 1	1.96	*	1.0*
	in the shoulder - 3	5.88		
The pains are seasonal	in the back- 2	3.92	*	<0.0001*
	yes - 4	7.84		
	no - 47	92.16		

Table2				
Symptoms of dyspepsia and previously diagnosed diseases				
Symptoms and previously diagnosed illnesses	Частота (n=51), абс.	%	χ^2 Пирсона	p
Belching	-sometimes	20	*	<0.0001*
	-often	4		
Nausea:	-sometimes	22	13.52**	<0.001**
	-often	7		
Vomiting	-sometimes	14	*	0.0022*
	-often	4		
Heartburn	-sometimes	23	*	<0.0001*
	-often	4		
Heartburn while lying down	-sometimes	10	*	0.055*
	-often	4		
	-constantly	4		
Feeling of heaviness after eating	- ulcer disease	16	11.1	0.004
	chronic gastritis	9		
	-cholecystitis	3		
	-pancreatitis	3		

heaviness after eating in 17.6% of cases, epigastric pain in 11.8%, girdle pain in 2%, nausea in 13.7%, and belching in 7.8% of cases, heartburn and vomiting. (pic. 3). The frequency of PD was similar to the frequency among the 2nd year students of the Omsk Medical University - 36% and in the Ural population - 23.4% (p = 0.77 and 0.097, respectively) [9]. When comparing the frequency of

FD symptoms with the results of studies by Belgian scientists, it was found that our respondents were much less likely to have symptoms such as feeling of heaviness and epigastric pain - 31.4% each versus 88 and 68, respectively (p <0.0001) [4].

Dyspepsia symptoms are often detected in 9.8% of students. This may indicate the presence of any organic lesion, and,

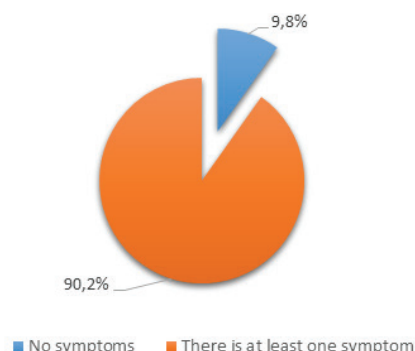


Fig. 1. Frequency of dyspepsia symptoms among respondents

as a result, organic dyspepsia. Students with frequent manifestations of dyspeptic symptoms require further research and additional diagnostic methods. Also, the presence of gastrointestinal tract pathology is shown by the survey data on previously diagnosed diseases. Out of 33.6% with symptoms of dyspepsia, 9.8% are associated with organic dyspepsia and corresponds to the literature data. Organic dyspepsia accounts for about 40% of all cases of dyspepsia diagnosed [7]. According to the questionnaire, students had a history of peptic ulcer disease in 1.9%, chronic gastritis in 3.9%, cholecystitis in 1.9%, and pancreatitis in 5.8%. Thus, functional dyspepsia is more common in students. According

to the duration of the onset of symptoms of dyspepsia over the past 2 years, they were identified in 45%, from 2 to 6 years in 6%, from 5 to 10 years - 2% and in 4% - more than 10 years (pic. 4). Also statistically significantly less frequent were: nausea - 43.1% versus 63 ($p = 0.02$), belching - 39.1% versus 58 ($p = 0.03$). Heartburn and vomiting appeared with a similar frequency - 45.1% versus 56 and 27.5% versus 30 ($p = 0.2$ and 0.75 , respectively) [4].

The overwhelming majority of the surveyed students (45%) had symptoms of dyspepsia over the past 2 years. Perhaps this is due to the high level of stress and significant changes during the period of schooling, with a significant increase in

psychoemotional loads and with the adaptation of freshmen to the new rhythm of life at the institute.

In this research, we studied the frequency of manifestations of dyspepsia symptoms among freshmen of a medical school, outlined the main forms and symptoms, and developed practical recommendations aimed at informing students about the symptom of dyspepsia and prevention of the disease.

Conclusion. As a result of the study, it was found that among first-year students, the symptoms of dyspepsia are 33.6%. Functional dyspepsia predominates, while organic dyspepsia accounted for 9.8% of the respondents with a history of gastrointestinal diseases. The most common symptoms of dyspepsia are nausea, heartburn, feeling of heaviness, belching, and pain. In terms of the duration of the symptoms of dyspepsia, most have worried about the last 2 years. We have developed practical recommendations informing about the symptom of dyspepsia and methods of its prevention. Students are encouraged to pay attention to the symptoms of dyspepsia, regularly undergo preventive medical examinations, follow a balanced diet and recommendations for the prevention of dyspepsia symptoms.

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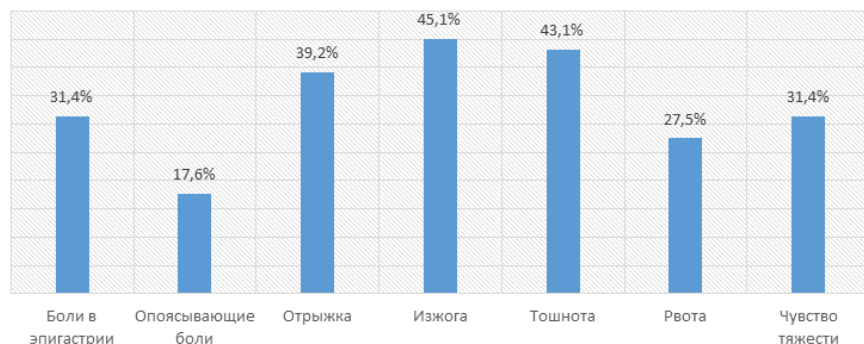


Fig. 2. Symptoms of functional dyspepsia

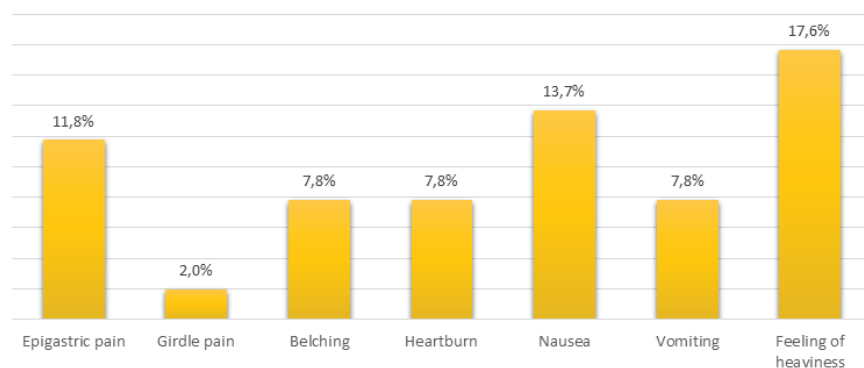


Fig. 3. Symptoms of organic dyspepsia

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COMPARATIVE CHARACTERISTICS OF MORPHOFUNCTIONAL INDICATORS OF PHYSICAL DEVELOPMENT OF YOUNG MEN

DOI 10.25789/YMJ.2020.72.16

Abstract. This article presents the comparative characteristics of the dynamics of indicators of physical development of young men. The study aims to carry out a comparative analysis of the dynamics of morphological and functional indicators of physical development and the functional state of male bodies at the youthful stage of ontogenesis. We have analysed the results of the one-time study (1999 and 2019) of 1st-year students; in total, 760 young male students were examined in 1999, and 273 students in 2019 (aged 17-18). To reveal research results of physical development indicators, we have carried out a comprehensive study of somatoscopic, somatometric, and functional indicators of young men. Analysis of the morphological and functional indicators of men in Yakutia at the youthful stage of ontogenesis over time (20 years of difference). We take into account the individual typological characteristics of the organism, manifested at the structural and functional level (somatotype), and reflected in the main anatomical and anthropological indicators of the organism. This makes it possible to state the impact of external factors (environmental, social influences; a complex of genetic and cultural characteristics) on the indigenous people of the North.

Keywords: morphological and functional indicators, sociotype, physical development, individual-typological characteristics.

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Relevance. The centuries-old long-term residing of indigenous peoples on the territory of the Sakha Republic has contributed to the formation of a morphological and functional ecotype that is maximally adapted to local extreme climatic and geographical conditions. However, recently there have been significant socio-economic changes in the areas of residence of the peoples of Yakutia, which had a significant impact on the health of the population. [9]

One has to agree that any hasty breakdown of an existing lifestyle can lead to changes in the morpho-functional state of the human body. [6] Recently, a decrease in the level of physical activity has been recorded; along with this, malnutrition and an improper lifestyle have been noted, which in turn leads to a decrease in the health indicators of learning youth. [1, 2, 5, 8].

In this regard, it became relevant to study the individual typological characteristics of the physical development of the indigenous population of Yakutia in

specific periods of ontogenesis (adolescence). The revealed features are necessary for preventive medicine and the development of targeted programs of physical education for the younger generation in the North-East of Russia.

Research Objective is a comparative assessment of the morphological and functional indicators of physical development and the functional state of male bodies at the youthful stage of ontogenesis.

Research Materials and Methods. In this work, we have analysed the results of a one-step study (1999 and 2019). The age range of the subjects is 17-18 years old. We included first-year students in random sampling; in total, 760 young male students (Group 1) were surveyed in 1999 and 273 students in 2019 (Group 2).

This study uses data from the work by Permyakova S.P. titled "Patterns of Morphological and Functional Development of Sakha Republic's Indigenous Population's Young Men" (2002) [9].