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Clinical and morphological characteristics of chronic gastritis with functional dyspepsia in the North

Abstract

The analysis of the clinical and endoscopic manifestations of the functional dyspepsia syndrome in patients of different ethnic groups, living in the Republic Sakha (Yakutia), is carried out. Among them patients with postprandial distress syndrome and epigastric pain are revealed. Clinical presentation and course of chronic gastritis with functional dyspepsia in the Republic Sakha (Yakutia) have a number of distinctive features: from the surveyed patients epigastric pain syndrome occurs in native and non-native patients, the intensity of pain in the natives is significantly lower than that in the non-natives. Postprandial distress syndrome was diagnosed in 2, 5 times more often in the native patients. At endoscopy in all patients with functional dyspepsia chronic gastritis was diagnosed. The natives more often have mixed gastritis, the non-natives - superficial gastritis. At the syndrome of epigastric pain continuous acid production and hyperacidity were registered more often in the non-natives, than in the indigenous population. At the postprandial distress syndrome normal acidity was more common in the indigenous population, in the non-indigenous - hyperacidity. At the syndrome of epigastric pain more effective was the prescription of anti-H. Pylori and anti-secretory drugs, and at postprandial distress syndrome – prokinetic drugs, at the identified hyperacidity the patients must receive in addition anti-secretory drugs.

Keywords: a syndrome of functional dyspepsia, epigastric pain syndrome, postprandial distress syndrome, gastric mucosa, Helicobacter pylori.

Introduction. Chronic gastritis with syndrome, functional dyspepsia (SFD) is one of the most pressing problems in medicine. Prevalence SFD is considered very high, but the exact static data, not, as many patients do not seek medical help. In recent years, a growing interest in functional dyspepsia. This is due primarily to the fact that this pathology along with other functional disorders of the digestive system causing significant economic losses to society, taking after acute respiratory infections second place in the list of most important causes of disability [2, 5, 6]. According to different authors, from dyspepsia suffer 30-40% of the population of Europe and North America. The annual incidence of dyspepsia syndrome is about 1% [7, 9]. At the same time

the share of functional dyspepsia falls from 50 to 70% of cases. Women dyspepsia occurs twice as often as in men [8, 10]. Frequency of symptoms of dyspepsia in the population is 30-40%, reaching in some countries, 60% or more. Gastrointestinal complaints are the cause of 4-5% of all cases of complaints of patients to general practitioners. In this case, the share of organic dyspepsia accounts for only 35-40% of all cases of this syndrome, and the proportion of functional dyspepsia - 50-60% [1, 3, 4].

Certain scientific and practical interest is the elucidation of the frequency and clinical manifestations of functional dyspepsia in patients hospitalized in the gastroenterology department YAGKB and frequency combinations of chronic gastritis (including H. pylori) with functional dyspepsia. Thus, many of the issues related to the study of functional dyspepsia in the Republic of Sakha (Yakutia), remain, gives reason to believe that their study is relevant.

The aim of the study was to investigate the clinical and morphological features of the chronic gastritis with syndrome pattern of functional dyspepsia in native-born and people of the Republic of Sakha (Yakutia), and to assess the effectiveness of treatment, depending on the gastric acid and H.pylori.

Material and methods. This study examined 105 patients with functional dyspepsia, including 41 patients with epigastric pain syndrome and 64 patients with postprandial distress syndrome. Considered groups of patients were homogeneous for age, gender, by ethnicity. Of the 105 patients included in the study, I group were 57 indigenous people (80% of them - Yakutia), II group - 48 people visiting (Caucasians). Considered groups of patients were homogeneous for age and sex. Group I included 22 men, 35 women, in the II group - 28 men, 20 women. The control group consisted of 30 healthy individuals. The range of initial evaluation included esophagogastroduodenoscopy. The study was combined with biopsy, which was taken at least 2 pieces: from the antral mucosa of the stomach body, in the presence of erosions of the mucous membrane - at least 4 pieces of the erosion.

Intragastric pH-metry was performed using autonomous atsidogastrometra "Gastroskan-24" (source system, Russia), which will record the pH automatically within 24 hours.

To determine the Helicobacter pylori in the gastric mucosa and the degree of contamination using histological, immunological and biochemical (rapid urease test) methods.

Histologically, the presence of NO were determined using enzyme immunoassay diagnostic system "HelikoBest antibodies." To confirm the eradication of H. pylori in patients along with the histological method used rapid urease test kits URE-Hp-Test-Pliva-Lachema (Brno, Czech Republic).

In assessing the results of histological examination for H. pylori are three degrees of contamination of the mucous membrane of the stomach, according to the Sydney classification: low - to 20, the average - from 20 to 50, and high - more than 50 microbial cells in the visual field.

Statistical analyzes were conducted with the use and combination of different methods and criteria(Student,Mann-Whitney). Data processing was performed using Statistica, version 6.0 (StatSoft, Inc.), Biostat 2007 2.0.

Results and discussion. In the analysis of clinical symptoms of functional dyspepsia patients identified with postprandial distress syndrome 64 (61%) and epigastric pain syndrome, 41 (39%). The main clinical manifestations of the syndrome of functional dyspepsia patients described by the group was the pain localized in the epigastric region, which was detected in 56,1±6,6% of patients with the indigenous population and 62,5±7,0% - the visitor ($p>0,05$). Along with pain in patients with indigenous populations were observed more severe diarrheal disorders: nausea - at 38,6±6,4%, vomiting - at 14,0±4,6, heartburn - at 21,1±5,4, regurgitation "odor of rotten eggs» - 29,8±6,1, bloating and fast saturability after taking even a small amount of food - from 31,6±6,2% of patients. Disorder observed in stool 12,3±4,4% as constipation and 24,6±5,7% of patients - in the form of diarrhea. In clinical manifestations of functional dyspepsia patients of this group dominated dyspeptic symptoms, predominantly in combination, such as: weight after meal with a sense of early saturation, bloating, rumbling, belching, nausea, vomiting. In the group of immigrants were more common: pain syndrome - 62,5±7,0% of patients with localization in the pyloroduodenal area and epigastric heartburn - at 54,2±7,2, burping - from 20,8±5, 9, early feeling of saturation - at 18,7±5,6, constipation - at 37,5±7,0% ($p <0,05$), and other symptoms of dyspepsia were observed less frequently. Thus, in patients with various functional dyspepsia in history can not be isolated only factors determining the development of clinical symptoms. Seems to play a role here summation pathogenic effects, that is, the disease is multifactorial in nature.

At esophagogastroduodenoscopy in patients indigenous most common mixed gastritis, focal atrophic gastritis and less superficial gastritis. The group of patients visiting more common superficial gastritis, which is combined with duodenogastric reflux. In 105 patients with the syndrome of functional dyspepsia, which included 51 men and 54 women aged 18 to 65 years, we have analyzed the degree of contamination H. pylori gastric mucosa. Lower degree of colonization of the gastric mucosa of the patients diagnosed in the indigenous population - (50,9%), moderate - (25,5%) and high - (23,6%). In patients visiting the degree of contamination is slightly higher than the root: low - (26%), moderate - (30%) and high - (44%).

A significantly greater degree of contamination H. pylori ($P <0,05$) was found in patients

with epigastric pain syndrome compared with postprandial distress syndrome can suggest that H. pylori infection plays a role in the genesis of pain in PD. Probably, H. pylori causes dysmotility of the upper gastrointestinal tract and increased visceral perception, which leads to the appearance of clinical symptoms of functional dyspepsia [2, 3].

The average pH of the stomach body was determined by the results of the 24-hour pH-metry in patients with epigastric pain syndrome, postprandial distress syndrome, functional dyspepsia.

The syndrome of epigastric pain hyperacidity was 51,2% (n-21), normatsidnost - 26,8% (n-11), hypoacid - 22,0% (n-9) cases. When postprandial distress syndrome of functional dyspepsia hyperacidity observed in 25% (n-16) of cases normatsidnost - in 56,2 (n-36), hypoacid - in 18,8% (n-12) of cases. Feature of gastric acid syndrome in patients with epigastric pain indigenous acid production is continuous and Hyperacidity - 4 (9,8±4,6%) cases normatsidnost - 3 (7,3±4,1%), hypoacid - 4 (9, 8±4,6%). From visiting patients gastric acid level somewhat higher: Hyperacidity was observed in 17 (41,4±7,7%) patients normatsidnost - in 8 (19,5±6,2%), hypoacid - in 5 (12,2±5 , 1%) patients ($p < 0,02$). For postprandial distress syndrome in patients with indigenous populations were characterized by: normatsidnost - in 29 (45,3±6,2%), hypoacid - in 10 (15,6±4,5%), hyperacidity recorded at least - in 7 (10 9±3,9%) patients. From visiting patients with postprandial distress syndrome is more common in hyperacidity, in 9 (14,1±4,4%), normatsidnost - in 7 (10,9±3,9%), hypoacid - in 2 (3,1±2,2%) patients ($p < 0,01$).

Thus, the syndrome of continuous epigastric pain and acid production Hyperacidity recorded more frequently in patients visiting - 17 (41,4±7,7%), and in patients with the indigenous population - 4 (9,8 ± 4,6%) cases ($p < 0,01$). When postprandial distress syndrome in patients with more common indigenous normatsidnost - 29 (45,3±6,2%), from visiting patients Hyperacidity - 9 (14,1±4,4%) ($p < 0,05$).

When comparing the average pH of the body of the stomach in two groups of patients with functional dyspepsia with the following results: the average pH in patients with epigastric pain syndrome was equal to 2,15 u, with postprandial distress syndrome – 5,1 units.

The highest acid production accounts for evening and night hours (20.00 to 04.00) - 1,4±0,2, which requires the use of antisecretory drugs with the biorhythm of acid.

We evaluated the relationship of acid-forming function of the stomach and pain intensity in patients with various forms of functional dyspepsia. Of the 41 patients with epigastric pain syndrome in 30 (73,2±6,9%) had hyperacidity, and the pain syndrome was detected in 10 (33,3%), moderate in 14 (46,7%) and the smaller - in 6 (20%) patients. In patients with moderate and mild pain was identified normatsidnost and hypoacid - in 5 (12,2±5,1%) and 6 (14,6±5,5%), respectively.

Consequently, the presence of pain in functional dyspepsia is significantly correlated with increased acid production in the stomach ($p < 0,05$), and when and hypoacid normatsidnyh states equally often present pain of moderate and low intensity.

Treatment of functional dyspepsia symptoms associated with great difficulties, because so far not developed effective therapies different variants of this syndrome. The variety of pathophysiological mechanisms of the syndrome of functional dyspepsia requires an individual approach to drug therapy in these patients. In this regard, there is still no consensus on the issue.

Patients with hyperacidity (n=31) was obtained as antisecretory therapy proton pump inhibitors - omeprazole (n=14), and rabeprazole (Pariet) (n=17).

Patients with normatsidnostyu and hypoacid H. pylori-negative received a prokinetic drug motilium 10 mg 3 times a day.

In the presence of H. pylori infection in all patients as a therapy of H. pylori received clarithromycin and amoxicillin for 7-day scheme.

When postprandial distress syndrome in 64 patients before treatment dyspeptic complaints reported 46.9% of patients (n=30) of them are dominated by moderate dyspeptic complaints - 18 (28,1%) compared with severe (n=13, 20,3%) and mild (n=3, 4,7%), dyspeptic complaints. On the 3-rd day of therapy, expressed dyspeptic complaints were recorded in 4 patients (6,25%), moderate dyspeptic complaints in 12% (18,75%), mild dyspeptic complaints - in 10 patients (15,63%). Only 3 days of treatment dyspeptic syndrome was arrested in 38 (59,37%) of 64 patients who complained of stomach indigestion before treatment. On day 5 of treatment expressed dyspeptic symptoms were observed, moderate dyspepsia occurred in 4 (6,25%), dyspeptic syndrome of low intensity - in 6 patients (9,38%). On day 7, treatment of dyspeptic complaints did not show any of the patients.

When FD with epigastric pain syndrome and postprandial distress syndrome after a month of treatment has been good progress.

Thus, the results of medical treatment of patients with functional dyspepsia led to the following conclusions.

In the presence of patients with functional dyspepsia of pain in the epigastric region, and 3,1 symptoms of discomfort in advanced gastric hyperacidity effectively destination 7–10 – days of therapy with proton pump inhibitors (omeprazole 20 mg 2 times a day), somewhat less effective in treatment of such patients therapy blockers H2-receptor antagonists, 150 mg two times a day (longer terms of treatment of pain and heartburn).

To eliminate a large number of clinical symptoms, usually combined into a single term "discomfort", require a comprehensive therapy including antisecretory agents in combination with

prokinetics, in some cases with enzymatic preparations.

Combined use of blockers of histamine H2-receptor with prokinetics, and some patients with the enzyme preparation showed high efficiency in the treatment of pain, and a large number of diarrheal illness in patients with functional dyspepsia.

A high level of eradication is achieved at the 10-day treatment of patients with chronic H. pylori gastritis with functional dyspepsia blockers, H_2-receptor antagonists in combination with two antibiotics (amoxicillin and tetracycline), which also should take note.

Thus, functional dyspepsia is one of the most common syndromes of the upper digestive tract, where there are various options for chronic gastritis with frequent persistence of H. pylori, a violation of the evacuation of the gastrointestinal tract. In the treatment of this syndrome have been used successfully H. pylori and antisecretory agents, with postprandial distress syndrome – prokinetics, and the detection of Hyperacidity designate antisecretory agents.

Conclusion. Clinical presentation and course of chronic gastritis with functional dyspepsia in the Republic of Sakha (Yakutia) have a number of distinctive features: epigastric pain syndrome occurs in 26,8% of patients and 73,2% of the indigenous population of the visitor, the intensity of pain in the root is much lower than that of visitors - 12 and 85% respectively. Postprandial distress syndrome was diagnosed in 71,9% of patients and 28,1% of the indigenous newcomers. At endoscopy in all patients with functional dyspepsia diagnosed chronic gastritis. The native inhabitants of the most common mixed gastritis (54,5%), the newcomers - superficial gastritis (66,7%). The syndrome of continuous epigastric pain and acid production Hyperacidity detected more often in immigrants (41,4%) than in the indigenous population (9,8%). When postprandial distress syndrome in indigenous normatsidnost more common (45,3%), the visitors – Hyperacidity (14,1%). The syndrome of epigastric pain more effective was the appointment of H. pylori and antisecretory drugs and at postprandial distress syndrome – prokinetic in identifying Hyperacidity therapy should supplement antisecretory agents.

References

1. Ivashkin V.T. Recommendations for evaluation and treatment of patients with the syndrome of dyspepsia: Manual for Physicians / V.T. Ivashkin, A.A. Sheptulin. - M.: 2001. – 30 p.

2. Pimanov S.I. Diagnosis and treatment of functional dyspepsia from the position of the Rome-III Consensus / S.I. Pimanov, E.V. Makarenko // Consilium medicum (Suppl): Gastroenterology. - 2007. - № 1. - P. 3-6.

3. Sheptulin A.A. Discussion of the problem of Helicobacter pylori infection in the European

Gastroenterology Week / A.A. Sheptulin, O.A. Mordanova // Rus. Journal. Gastroenterol., Gepatol., Koloproktol. - 2007. - V. 14, № 2. - P. 88-92.

4. Zimmermann Y.S. Gastroenterology / Y.S. Zimmerman.- M., 2012. - P. 102-120.

5. Drossman D.A. The functional gastrointestinal disorders and the Rome-III process. / D.A. Drossman // Gastroenterology. – 2006. – Vol. 130 (5). – P. 1377–1390.

6. Functional bowel disorders / G.F. Longstreth, W.G. Thompson, W.D. Chey [et al.] // Gastroenterology. – 2006. – Vol. 130 (5). – P. 1480–1491.

7. Functional gastroduodenal disorders. / G. Tack, N.G. Talley, M. Camillery [et al.] // Gastroenterology. – 2006. – Vol. 130 (5). – P. 1466–1479.

8. Gastric mucosal mast cells are increased in Helicobacter pylori-negative functional dyspepsia/ W. Hall, M. Buckley, P. Crotty, C.A. O'Morain - Clin Gastroenterol Hepatol - 2003 Sep. – 1(5).-P. 363-369.

9. Pattern of gastric emptying in functional dyspepsia. An ultrasonographic study/ M. Loreno, A. M. Bucceri, F.Catalano [et al].-Dig Dis Sci - 2004 Mar. – 49(3). – P.404-407.

10. Treatment of Helicobacter pylori in functional dyspepsia resistant to conventional management: a double blind randomized trial with a six month follow up/ HR Koelz, R. Arnold, M. Stolte [et al]. Gut.- 2003 Jan.-52(1).P. 40–6.

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Table 1

Endoscopic picture of the various options syndrome functional dyspepsia, n (M±m%)

Endoscopic picture	Epigastric pain syndrome (n – 41)		Postprandial distress syndrome (n – 64)		
	1 group (n – 11)	2 group (n – 30)	P	1 group (n – 46)	2 group (n – 18)	P
Pathology wasn't found.	–	2 (6,7±4,6)	–	1 (2,2±2,2)	–	–
Endogastritis	2 (18,2±11,6)	16 (53,3±9,1)	>0,01	15 (32,6±6,9)	12 (66,7±11,1)	<0,02
Focal atrophic gastritis	3 (27,3±13,4)	5 (16,7±6,8)	>0,05	11 (23,9±6,3)	2 (11,1±7,4)	>0,05
Mixed gastritis	6 (54,5±15,0)	7 (23,3±7,7)	<0,02	14 (30,4±6,8)	2 (11,1±7,4)	<0,04
Duodenogastric reflux	–	–	–	5 (10,9±4,6)	2 (11,1±7,4)	<0,03

Table 2

The degree of colonization of the gastric mucosa Hp patients in different ethnic groups, (M±m%)

The degree of contamination HP	Altogether (n-105)	Including		P
		1 group (n-57)	2 group (n-48)	
H. pylori +	40 (38,1±4,7)	13 (22,8±5,6)	22 (45,8±7,2)	<0,03
H. pylori ++	30 (28,6±4,4)	16 (28,1±6,0)	14 (29,2±6,6)	<0,01
H. pylori +++	35 (33,3±4,6)	28 (49,1±6,6)	12 (25,0±6,3)	<0,03