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The Incidence of Ulcerogenesis Exogenous Factors in Patients with Newly Diagnosed Stomach Ulcers, Complicated with Bleeding and Perforations

ABSTRACT

The purpose of the study. To study the incidence of exogenous factors and ulcerogenic topical features of newly diagnosed gastric ulcers in the KhMAO-Yugra residents.

Materials and methods. A total of 32 residents of Yugra Khanty-Mansi Autonomous with newly diagnosed stomach ulcers were under study. All patients in the examination of stomach ulcers are diagnosed based on the EFGDS results.

Results. There was revealed a predominant localization of ulcer bleeding from newly diagnosed gastric ulcers - the body of the stomach. It was noted the high frequency of alcohol-related new cases of stomach ulcers, complicated with bleeding. Perforations of new cases of stomach ulcers are not exceeding the rate of exogenous factors of ulcerogenesis compared with bleeding and uncomplicated new cases of stomach ulcers.

Conclusion. It is noted the high frequency of alcohol associated newly diagnosed gastric ulcers complicated by bleeding. Mixed Hp-invasion and NSAIDs for bleeding ulcers of new cases are less common than in patients with uncomplicated disease.

Keywords: ulcer, stomach, bleeding, perforation, H. pylori.

INTRODUCTION

Ulcers in the stomach are found in four times less than in the duodenum [3,12]. At the same time ulcers in the stomach are characterized by often recurrent course, the severity of complications [6,9], a longer period is necessary to restore the integrity of the gastric mucosa [7,13].

The formation of ulcers in the stomach is associated with the action of the numerous exogenous factors: invasion of *Helicobacter pylori* (Hp), the action of non-steroidal anti-inflammatory drugs (NSAIDs), alcohol [4, 11, 15].

The complexity of the problem of diagnosis of ulcers in the stomach and predict their risk of morbidity due to the fact that the formation of ulcers in the stomach is often accompanied by morphological rearrangement of the gastric mucosa with the formation of metaplastic, dysplastic, and paraneoplastic changes [1,14], reducing its regenerative capabilities and resilience to exogenous ulcerogenic factors [2, 10].

Histological study of biopsy specimens of the gastric mucosa is a must study the detection of gastroduodenal ulcers [8]. At the same time great importance is the timely detection and elimination of exogenous ulcerogenic factors [5,15].

Objective: to study the incidence of exogenous factors and ulcerogenic topical features of newly diagnosed gastric ulcers in the KhMAO-Yugra residents.

MATERIALS AND METHODS

A total of 32 residents of Yugra Khanty-Mansi Autonomous with newly diagnosed stomach ulcers in KhMAO-Ugra "County Hospital" in 2011-2012: 17 men, 15 women, aged 54 ± 13.9 yrs, were under study. The first group consisted of 15 patients with newly diagnosed stomach ulcers, perforations and bleeding complications: I subgroup (11) and subgroup 2 (4 people), respectively. The comparison group consisted of 17 patients with newly diagnosed gastric ulcers not accompanied by a complicated course.

All patients in the examination of stomach ulcers are diagnosed based on the results EFGDS. At the same time in all patients a stomach ulcer or duodenum were not previously detected.

Among ulcerogenic factors were evaluated: the availability of HP-invasion, non-steroidal anti-inflammatory drugs (NSAIDs), alcohol intake before diagnosed gastric ulcer.

At the diagnosis of ulcers their localization was recorded and assessed: cardiac, antrum and gastric body.

EFGDS was carried out in the usual manner with gastroscope «OLYMPUS GIF-Q 160".

The presence of Hp-invasion was verified by morphological study of biopsy material of gastric mucosa in the Hp and using enzyme-linked immunosorbent serologic method.

Statistical analysis was performed using Statistica '99 Edition (Statsoft). The statistical significance of differences between groups was assessed using Pearson's chi-squared test - χ^2 . The critical level of significance when testing statistical hypothesis $p < 0.05$.

The study complies with the principles of the Helsinki Declaration on Human Rights, reviewed and approved by the local ethics committee members BU "Khanty-Mansiysk State Medical Academy".

RESULTS AND DISCUSSION

In the patients with newly diagnosed stomach ulcers we revealed bleeding and perforation at the complicated disease in 73 and 27%, respectively. At the same time, bleeding

ulcers of the gastric mucosa in the examined patients is found significantly more often than the perforation of ulcers ($\chi^2 = 6.53$ $p = 0.0106$).

When analyzing ulcerogenesis factors patients of comparison group their frequency is 53% of cases (Table). The most important factors are: HP-invasion and NSAIDs (89% identified ulcerogenic factors), exceeding the rate of gastric ulcers associated with alcohol ($\chi^2 = 10.89$ $p = 0.0010$).

Mixed HP-invasion and NSAID in the comparison group is 56% of the total number of identified ulcerogenic factors (Table).

At the comparing of the frequency of exogenous ulcerogenic factors in patients of group 1 and comparison group we revealed no statistically significant differences ($p > 0.05$; Table).

Table

Comparative analysis of ulcerogenic and topic factors in newly diagnosed gastric ulcers complicated by bleeding and perforation

	Patients with newly diagnosed gastric ulcer (group1-15)			Patients with first identified universe-gastric ulcer (comparison group - 17)		
	bleeding complications	$\chi^2 *$	complications of perforation	comparison with subgroup 1	number of patients	compared to subgroup 2
	1st subgroup (11)	p	2nd subgroup (4)	$\chi^2 *$	17	$\chi^2 *$
				p		p
Factors of ulcerogenesis	8 (73%)	2,78	1 (25%)	1,10	9 (53%)	1,01
		0,0952		0,2951		0,3141
1. Helicobacter pilori	2 (18%)	0,84	0 (0%)	0,00	3	0,82
		0,3596		0,9712		0,3642
2. NSAIDs	2 (18%)	0,84	0 (0%)	0,45	5	1,54
		0,3596		0,5027		0,2140
3. Alcohol	4 (36%)**	1,98	0 (0%)	4,23	1	0,25
		0,1590		0,0397		0,6192
4. Mixed: Helicobacter pilori + NSAID	0 (0%)	2,95	1 (25%)	3,94	5	0,03
		0,0861		0,0472		0,8605
Localization of newly diagnosed ulcers						
gastric antrum	2 (18%)	1 (25%)		6 (35%)		

the body of the stomach	8 (73%)	3 (75%)	11 (65%)
cardia	1 (9%)	0 (0%)	0 (0%)
Factors of ulcerogenesis	15		17
1. Helicobacter pylori	2 (13%)	3 (18%)	0,11 0,7373
2. NSAIDs	2 (13%)	5 (29%)	1,21 0,2722
3. Alcohol	4 (27%)	1 (6%)	2,61 0,1061
4. Comparison of the frequency of ulcer bleeding: Antrum / body of stomach	2/8**	-	
5. Comparison of the frequency of ulcer perforation: Antrum / body of stomach	1/3	-	

Note: * - χ^2 - Pearson's chi-squared test; ** - Statistically significant excess incidence of criterion when comparing the 1st and comparison group ($p < 0.05$).

A more detailed analysis revealed that in the patients of the 1st subgroup alcohol-associated gastric ulcers were significantly higher than those ulcers in the comparison group. Wherein mixed Hp-invasion and NSAIDs in patients with newly diagnosed ulcers, complicated with bleeding, we revealed statistically rarely than those of the comparison group ($\chi^2 = 3.94$ $p = 0.0472$).

The analysis of topic features of newly diagnosed gastric ulcers complicated by bleeding, we found their predominant localization in the stomach compared with its cardiac and antral departments ($\chi^2 = 7.20$ $p = 0.0073$).

In the analysis of the frequency of occurrence of exogenous ulcerogenic factors in patients with newly diagnosed gastric ulcers complicated by perforation statistically significant differences from the control group are not revealed ($p > 0.05$). It should be noted a relatively low level of occurrence of ulcerogenic exogenous factors, mainly due to mixed HP-invasion and NSAIDs - 25% in the 2nd subgroup (Table).

We did not detect topic laws at perforations of newly diagnosed gastric ulcers in the studied patients ($p > 0.05$ cm. Table 1).

When comparing the frequency of detection of ulcerogenesis exogenous factors in the patients of the 1st and 2nd subgroups no statistically significant differences have been revealed ($p > 0.05$).

CONCLUSIONS

At the non - complicated course of the newly diagnosed gastric ulcers among ulcerogenic exogenous factors, account for 53%, the most significant are Hp-invasions and NSAIDs as mono and mixed ulceration factors.

In the patients with newly diagnosed stomach ulcers, with bleeding complications statistically significant excess of the alcohol - associated ulcers when compared to the comparison group. At the same time it is found that bleeding is associated with ulcers mainly in the stomach body, exceeding antral and cardiac localization of gastric ulcers complicated by bleeding.

Complication in the form of newly diagnosed ulcer perforation, is associated with exogenous factors only in 25% of cases associated with simultaneous action on the gastric mucosa of Hp invasion and NSAIDs, and has apparently deeper mechanisms concerning the state of the gastric mucosa and endogenous factors having antiulcerogenic properties.

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