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### **SIGNIFICANCE OF RISK FACTORS IN THE EARLY DIAGNOSTICS AND PRIMARY PREVENTION OF PEPTIC ULCER**

*ABSTRACT.* We have analyzed medical cards of ambulatory patients who were diagnosed with the gastric ulcerous disease for the first time. The research included patients (87 people) with typical (63 people) and atypical (24 people) disease pattern. Presence and structure of the risk factors in both groups of the patients have been studied. Three groups of the risk factors were estimated: exogenous, endogenous and hereditary-constitutional. Only 12% of the patients in both groups did not have any ulcer disease risk factors. The most significant factors in the group of the patients without typical characteristics of ulcer disease: non-compliance with a dietary pattern (87,5%), alimentary errors (37,5%), burdened heredity (29,2%), hyperacidity (25,0%). In the cases of atypical clinical pattern, presence of the risk factors should be a reason for additional examination for the purpose of exclusion or confirmation of ulcer disease. This will allow organizing primary prevention and early diagnosis. Patients with detected risk factors, not suffering from peptic ulcer, must be enrolled in a special group for follow-up care and monitoring.

*KEY WORDS.* Peptic ulcer, risk factors, early diagnostics, primary prevention.

According to the data of the research 6-10% of the Earth's population suffers from peptic ulcer (PU) [1; 43]. Nowadays, probably due to better diagnostics, there is a distinct tendency of increasing cases of peptic ulcer (PU) with a simultaneous decrease in other digestive tract pathologies. Under the contemporary conditions the disease often acquires a "non-typical" character [2; 17]. Not only senior patients but also younger age groups have subtle clinical signs of PU [3; 39-43], [4; 22-26], which do not affect their life quality [5; 213], and as a consequence there is late medical consultation and diagnostics. Sometimes the disease manifests itself by life threatening complications [6; 19]. It means that while PU diagnostics, besides clinical implications, there should be also other markers. PU development risk factors can become such orienting points for the doctor. Combined even with the minimal clinical signs they should call for a special examination aimed at PU diagnostics verification. There are three groups of risk factors: exogenous, endogenous and hereditary-constitutional [7; 24].

Exogenous factors are alcohol abuse, fast food diet, absence of a dietary pattern, a diet unbalanced in its main components, frequent or long-term treatment with ulcerogenic drugs [8; 28], frequent stresses [2; 17] etc.

Endogenous PU risk factors include activity increase of aggression factors (high-rate acidogenesis processes, gastrin hyperproduction, increase in pepsin level), increased motion in the gastrointestinal tract and protection factor activity reduction. Many issues

concerning PU remain discussable [9; 70-72], [10; 253], [11; 28-54]. One of the actively discussed questions is the influence of *Helicobacter pylori* (HP) on these processes [7; 24]. Hereditary-constitutional factors are considered the most important in PU development. PU is believed to be inherited paternally; however, nowadays maternal inheritance is not denied either. These are PU genetic markers: 0(I) blood group, pepsinogen I increase in blood, acetylcholine and cholinesterase increase in blood plasma and antigen detection of the system HLA-B-5; B-15; B-35.

**The goal of the research:** estimation of the presence, structure and significance of the risk factors of the patients with the primary PU diagnosis displaying typical and non-typical clinical signs.

**Materials and methods.** We have analyzed medical cards of the patients for the first time diagnosed with PU in the period 2010-2012.

87 patients were included in the group: 59 males (18-60 years old) and 28 females (23-60 years old). In 17 cases (19.5%) out of all the cases (61 cases of duodenal ulcer and 26 cases of stomach ulcer) PU was diagnosed in hospital during first aid connected with complications (bleeding, perforation, penetration, reactive pancreatitis). In the outpatients clinic PU was diagnosed for 36 (41.4%) patients and in Health centers PU was suspected and confirmed in 34 (39.1%) cases.

**Research findings and discussion.** Analyzing medical cards we found out that 63 patients out 87 (72.4%) had typical clinical manifestations and diagnosis confirmation did not require any serious diagnostic thinking. 24 patients (27.6%) had no signs of PU in their disease pattern. The risk factors initiated a special examination and diagnosis confirmation. The structure of the risk factors in the group under study is shown in table 1.

Table 1

The structure of PU risk factors of the examined patients

Risk factors	PU patients with clinical manifestations n=63	PU patients without clinical manifestations n=24
Negative hereditary background	n= 63	n= 24
Malnutrition	12 persons (19,0%)	7 persons (29,2%)
Blood group 0(I)	21 persons (33,3%)	9 persons (37,5%)
Hyperacidity	17 persons (27,0%)	6 persons (25,0%)
Hypergastrinemia	14 persons (22,0%)	6 persons (25,0%)
Absence of a dietary regimen	3 persons (4,8%)	-
Long-term use of ulcerogenic drugs	0 persons (0%)	21 persons (87,5%)
Professional contact with gastrotropic substances	0 persons (0%)	4 persons (16,7%)
Other risk factors	0 persons (0%)	4 persons (16,7%)
Absence of risk factors	11 persons (17,5%)	5 persons (21,7%)

As one can see from the given data more patients with typical clinical manifestations of peptic ulcer have the first blood group (27%), high percentage of hyperacidity (22%) and negative hereditary background (19%).

The patients with a genetic predisposition, blood group 0(I), alimentary problems, alcohol abuse and frequent stresses might have PU even without clinical symptoms. Having no reason for seeking medical assistance they should be examined in Health centers and undergo annual screenings and regular occupational health examinations according to Order of the Ministry of Health of RF No. 302 dated 01.01.2011. The patients with risk factors but without PU should be closely examined and instructed in theme health schools (giving up bad habits, change of diet etc.). Reduction of aggression factors, proper nutrition, cytoprotective therapy, and rational employment are the primary PU preventive measures.

**Conclusions.** In both groups of PU patients only 12.5% and 12.7% patients have no risk factors. In the non-typical disease pattern risk factors are the reason for PU examination and diagnostics. The most significant risk factors are: hereditary background, hyperacidity, 0(I) blood group, malnutrition, and absence of a dietary regimen. Close monitoring of the gastroduodenal mucosa while screening of the patients with risk factors will ensure early disease diagnostics. Elimination of the risk factors and prophylactic treatment will be the first prevention of the disease in question.

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