



CONNECTION OF CLINICAL MANIFESTATIONS OF GASTROESOPHAGEAL REFLUX DISEASE WITH THE CHARACTER OF REFLUXATE

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ABSTRACT

The clinical signs of the 74 patients suffered from gastroesophageal reflux disease are profoundly researched in this article. On the basis of the carried researches it is possible to conclude, that character of bile acid reflux leaves a certain mark on features of display of clinical signs of gastroesophageal reflux disease. Such clinical signs as a pain behind a breast, odinofagy, disfagy and bitterness in a mouth have appeared more characteristic for alkaline, and others as a heartburn, a pain in shoulder-blade areas and an eructation, on the contrary, for sour indicators of bile acid reflux.

The urgency of the problem. In less than 20 years, gastroesophageal reflux disease (GERD) has rapidly cleared out of the least noticeable into the cohort of the most popular diseases not only of the digestive tract, but also of other body systems. This is confirmed by a flurry of scientific publications covering the diverse parameters of GERD. To date, the features of the manifestation of many clinical signs of GERD with the disclosure to the intricacies of the mechanism of their occurrence are described quite clearly. To match them, the "extraesophageal" manifestations of GERD and their differentiation from some laryngopharyngial, bronchopulmonary and heart diseases are also vividly described [2,3,4,7].

It goes without saying that the severity of the leading clinical and endoscopic signs of GERD depends on a number of factors, including the intensity of reflux and its duration, the compensatory capabilities of the esophageal clearance, and others [5,6]. Refluctate also fully claims the right to be included in this series, or rather not it itself, but its character. Theoretically, it can be assumed that the manifestation of individual clinical and morphological signs of GERD to a certain extent may be dependent on the nature of refluctate. Another question is, which of them and in what measures? There is no doubt that the solution to this problem will be of indisputable benefit in optimizing the tactics of managing and treating patients



with a real ailment. In search of a proper answer to the question posed, the present work was undertaken to identify a possible connection between the features of the manifestations of individual symptoms of GERD and the nature of refluctate.

Materials and research methods.

To solve the set tasks, 74 patients with GERD at the age from 18 to 56 years were involved in the scope of the study. All patients had stage I (mild) and stage II (medium) GERD according to the classification proposed by one of the authors of this work [1]. The consent of patients and members of the ethical committee for human rights in biomedicine at the Bukhara Medical Institute was obtained for the study. All patients were divided into two representative groups by age and number of patients, average duration of anamnesis, and gender indicators. The main criterion for differentiating patients was the nature of the refluctate. In patients of the first group, it was sour and looked 3.2 ± 0.5 on average. In contrast, in the patients of the second group, the nature of the refluctate was alkaline and amounted to 8.7 ± 0.7 . The manifestation of clinical signs of GERD was assessed on a three-point scale with gradations: high (+++), medium (++) and weak (+) severity. The basis for the grading of the leading symptoms were: the frequency of daily manifestations, their duration, the impact on the quality of life, etc. The diagnosis of GERD was verified based on the use of clinical, radiological and endoscopic research methods. The nature of refluctate was studied using the PH-metry, carried out in vitro. To carry out the latter, the refluctate was extracted through the endoscope and immediately immersed in a

test tube, then ex tempore was performed PH - metry.

Results and discussion. To assess the characteristics of clinical manifestations, the first duty was to outline the circle of the leading symptoms of GERD, which constitutes the essence of the disease. Only then did they proceed to the analysis of each symptom of the disease, taking into account the nature of the refluctate. At the same time, two of the most important, in our opinion, qualities of clinical signs of GERD were subjected to a more thorough analysis: the frequency of occurrence and the degree of their perception. The severity of the latter indicator was assessed on a three-point scale. The results are shown in Table 1.

As follows from the data presented in the table, the frequency of manifestations of the leading symptoms of GERD was different and clearly dependent on the nature of refluctate. The indicated dependence mostly concerned the manifestations of belching, pain syndrome (PS) and odynophagia, to a lesser extent - bitterness in the mouth, heartburn and halitosis. Among all the clinical signs of GERD, heartburn turned out to be more characteristic and at the same time stable. It dominated the spectrum of clinical manifestations of GERD, regardless of the nature of refluctate. So, if the frequency of manifestation of this symptom in patients with acid refluctate (AcR) was 97.6%, then with alkaline reflux (AIR) it turned out to be slightly less and looked like 73.8%. As you can see, the size of the difference was not so impressive. On the other hand, there was a pronounced difference in the degree of perception of the heartburn symptom, directly correlating with the nature of the refluctate. The degree of perception of the heartburn symptom in 1/3 of the patients



with AcR was high (+++), in so many of the average (++), and in the rest of the weak (+) severity. A slightly different arrangement of the degree of heartburn perception was observed in AIR individuals. Only 1/10 of them had a high (+++), and the rest of the average (++) and weak (+) degrees of heartburn perception were equally represented.

The frequency of occurrence of another equally important clinical sign of

GERD - belching turned out to be impressive. If, it was detected, in almost all (94.1%) patients with GERD with AcR, then in patients with AIR, only 15.3% of them. The detected contrast in the indicators of the spread of the eructation symptom in the presence of appropriate laboratory and instrumental supporting facts can play the role of an important clinical criterion that makes it possible to differentiate AcR and AIR.

Table 1.

Comparative assessment of the frequency of manifestations of clinical signs of GERD, taking into account the nature of refluctate

№	Symptoms GERD:	Refluctate nature			
		Acidic (n=38)		Alkaline (n=36)	
		Abs.	Rel.(%)	Abs.	Rel.(%)
1.	Heartburn	37	97,3	27	75
2.	eructation	36	94,7	6	16,6
3.	Pain syndrome with localization:				
	a) in the epigastrium	34	89,4	6	16,6
	b) behind the sternum	1	2,6	31	86
4.	Dysphagia	29	76,3	33	91,6
5.	Odynophagia	4	10,5	20	55,5
6.	Bitterness in the mouth	13	34,2	33	91,6



Another revealed difference in the indices of the eructation symptom was the peculiarities of its manifestation in the examined patients. Thus, in patients with AcR, single but sonorous eructations were noted. With alkaline refluctate readings, quiet, serial eructations were emitted. Moreover, in the former, belching was sometimes accompanied by regurgitation of liquid with a sour taste, and in the latter, a bitter one. The revealed differences in the manifestations of the belching symptom in the examined patients, in aggregate, significantly increased the diagnostic chances of this clinical sign. The qualitative indicators of PS in patients with GERD with different types of refluctate turned out to be no less contrasting. An obvious distinguishing parameter of the PS was its localization. Most often, the posterior sternal and epigastric localization of PS was noted. In AcR, the epigastric localization of PS was predominantly revealed (89.4%), while in AlR, on the contrary, it was posterior to the sternum (86%). Moreover, PS in patients with AcR was most often burning, in patients with AlR it was dull or indefinite. The difference in the manifestations of the PS intensity turned out to be very characteristic. Rather high (+++) and (++) intensity indices were observed in AcR, and, on the contrary, in AlR, low (+). There were other qualitative differences in the PS parameters, but they were not so significant. In this connection, we decided not to dwell on them. The next symptom of GERD worthy of attention was dysphagia. This clinical sign was observed much more often in patients with GERD (91.6%) with AcR. At the same time, in GERD patients with AlR, the incidence of this symptom was an order of magnitude lower and amounted to 76.3%. In addition,

dysphagia in patients with different indicators of pH (acidic and alkaline) also differed in the level of sensation of this clinical sign. So, in AcR, the violation of the act of swallowing was much more often felt at the level of the upper third of the esophagus (oropharyngeal dysphagia), and in AlR, on the contrary, at the level of the lower third (esophageal dysphagia). At the same time, the feeling of dysphagia was moderate (++) or very pronounced (+++) in patients with GERD with AcR. At the same time, in GERD patients with AlR, this sensation was much weaker (+). The noted differences in the manifestations of the symptom of dysphagia, depending on the indicators of refluctate, deserve due attention to it. In combination with other characteristic symptoms (belching, heartburn, PS), GERD increases the scale of the cognitive capabilities of clinical signs.

Distinctive features were observed in the manifestations of another no less significant symptom of GERD - odynophagia. This clinical sign was much more often recorded in cases of an alkaline (55.5%) nature of refluctate. With AcR, it was much less common and amounted to only 10.5%. Such a tangible difference in the manifestations of the symptom of odynophagia, probably due to the nature of refluctate, requires a special attitude towards it. Because, under certain circumstances, the potential for its significance in establishing the nature of refluctate can become critical. As for the severity of the perception of the symptom of odynophagia, some distinctive features were also observed for this parameter. The sensation of pain during the act of swallowing was moderate (++) and high (+++) with AcR. Then, when the character of reflux turned out to be alkaline, these



sensations were more consistent with its weak (+) gradation. The clinical sign of bitterness in the mouth was also more characteristic for alkaline refluctate indicators. This sign took place in 91.6% of cases of AIR. At the same time, in AcR, it was encountered in only 34.2% of the cases of the study. In the light of the results obtained, it can be argued that the potential for a sign of bitterness in the mouth is large enough and therefore may serve as an indicator in

delineating the nature of refluctate. Thus, on the basis of the studies carried out, it can be concluded that the nature of refluctate leaves a certain imprint on the manifestation of clinical signs of GERD. Such clinical signs as chest pain, odynophagia, dysphagia and bitterness in the mouth were more typical for alkaline, while others such as heartburn, pain in the epigastric region and belching, on the contrary, for acidic refluctate indicators.

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