

Some metabolic parameters of saliva in patients with ulcer disease and coronary artery disease

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Diseases of gastrointestinal tract and cardiovascular system play an important role in forming of structure of human pathology. In same time, pathogenesis of separate coronary artery disease (CAD) and ulcer disease (UD) is studied in details, but mechanisms of its combination in not so clear. In this connection, investigation of metabolic changes is associated with indicated combined pathology is very actual now.

The *purpose of this study* is an evaluation of free and initiated crystallization of saliva in patients with CAD and UD.

Materials and methods. The diagnosis of coronary artery disease was established on the basis of clinical examination and instrumental methods (registration of ECG at rest and with physical activity, monitoring of ECG Holter, echocardiography). Angina of I FC diagnosed in 45 examined patients (40.2%), angina of II FC - 67 (59.8%). The long history of CAD ranged from 2 to 8 years. History of 29 patients (25.8%) was of myocardial infarction older than 2 years. During the study in 94 patients (83.9%) and peptic ulcer disease was in remission, 18 patients had the acute stage (16.1%). Heart failure of I FC detected in 67 patients (59.8%), CH II FC – in 45 (40.2%). Diagnosis of peptic ulcer was verified with fibrogastroduodenoscopy. In 83 patients (74.1%) we diagnosed duodenal ulcer, in 29 cases (25.9%) - ulcerative disease of the stomach. For diagnostics of *Helicobacter pylori* infection biopsy method and serological study were used.

We examined saliva and urine in patients with isolated CAD (n=35), UD (n=48) and with their combination (n=112). Features of the own and initiated crystallization of biological substrates were evaluated with the specialized system of quantitative parameters (Martusevich A.K., Grishina A.A., 2009). In teziographic test basic substance was 0.9% solution of sodium chloride.

Results and discussion.

Studies have shown that trends of saliva and urine crystallogenesis in this comorbidity characteristic in common. So, when studying free of crystal formation urine of patients with combined CAD and UD found that, for all specimens is characterized by the presence in facies as substances amorphous structure, and the presence of dendritic component, and visualized crystals single-crystalline and dendritic number. Marginal protein zone on the both samples there is clearly or not, throughout facies. The extent of destruction facies, reflecting sequence flow crystallogenesis, showed the presence of numerous destroyed crystal structures. These results were confirmed in vizuametric analysis of crystallograms of these biological liquids of healthy people and patients with combined pathology.

On the basis of the morphometric study of urine crystallograms we detected that facies in patients that only have a stomach ulcer, demonstrate elevation of crystallogenic potential compared with bioliquids of the healthy subjects. This is evidenced by the increase in the structure index of the sample, indicating the difficulty of elements structuregenesis of the latest and crystallizability. Pathological character of this crystalloscopic «pattern» underlined the high level of destruction of the structural elements.

At comorbidity the crystalloscopic facias of urine has a fundamentally different features: crystallograms in this case founded numerous single-crystal elements with an extremely high degree of destruction, as evidenced by the corresponding values of the index structure and crystallochemistry.

Study free of crystallization of saliva in patients with concomitant ischemic heart disease and stomach ulcers has allowed establishing the following regularities. The discrete part of all the examples presented amorphous bodies and single crystalline elements, and draws attention to

the extremely high density of crystallization centers in the sample. The marginal area is expressed around the perimeter of sample.

Vizuometric analysis of saliva crystalloscopic facias also demonstrated that the formation of the new pathological «pattern» in combined pathology, is fundamentally different from the characteristic of isolated diseases and non algebraic average.

The most significant shifts of crystal formation of oral fluid detected in patients with combined coronary heart disease and stomach ulcers. So, for crystallograms in these patients characteristically clearly viewed the prevalence of single-crystal elements on dendritic, and the density structures in facias significantly reduced compared with healthy people and patients in the other groups. The severity and depth of metabolic disorders, occurring in the oral fluid of patients with combined pathology, optionally specifies the near-destruction of the structural elements facias.

Conclusion.

Therefore this co-morbidity makes the specifics in the crystallogenic properties biological fluids of patients with ischemic heart disease and ulcerative diseases.