

according to cervicohysterosalpingography (defects in filling the uterine cavity associated with the presence of submucous fibroids, "contour shadows", curvature of the uterine cavity, enlargement of the uterine cavity, reduction of the uterine cavity) were identified in 87,3% of women.

Conclusions. Analysis of clinical data showed that the risk group for the development of a combination of uterine fibroids and endometriosis includes patients with aggravated obstetric and gynecological history, suffering from recurrent miscarriage. Consequently, this group of women requires specially developed treatment and rehabilitation measures, which are at the same time effective in relation to clinical manifestations and allow preserving reproductive function.

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8-ISOPROSTANE AS A NON-ENZYMATIC MARKER OF OXIDATIVE STRESS IN STUDENTS WITH GASTROESOPHAGEAL REFLUX DISEASE

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Relevance. The antioxidant system of the body has a four-level defense and a two-component system of organization, which allows to control the formation of toxic radicals, thereby manifesting its detoxifying properties [1]. The two-component nature of the system is provided by enzymatic (superoxide dismutase, catalase, glutathione, etc.) and non-enzymatic (ascorbic acid, carnosine, reduced glutathione, anserine, vitamin A precursor β -carotene, α -tocopherol (vitamin E), carotenoids, vitamins of the K group, ubiquinone) components [2]. Normally, the formation of free radicals and under-oxidized metabolic products occurs continuously during biochemical reactions of the body. The balance is maintained by antioxidant enzymes capable of neutralizing high oxidative potential molecules. Each of these substances provides control of the formation of toxic radicals and their neutralization, which allows the system to maintain homeostasis of the environment. The development of a pathological condition, which is based on an inflammatory reaction or ischemia, leads to the activation of the system, and

the level and strength of its response depends on the nosology, the nature of the process (chronic, acute), its duration, concomitant diseases and complications [3].

Diseases of the digestive tract are the most common among students, which is associated with the state of the central nervous system (the predominance of autonomic disorders), irregularities in the diet, the specifics of the diet (spicy and fried foods, carbonated drinks), smoking, chronic stress (student environment). These diseases include gastroesophageal reflux disease (GERD) the number of which among the young population is growing every day [4].

Aim of study. The aim of the work was to clarify the state of the non-enzymatic link of the antioxidant system by assessing the content of 8-isoprostane in students with gastroesophageal reflux disease.

Methods. Materials and methods. The study involved 45 university students aged 18-25 years, whose medical history (GERD) did not exceed 3 years. The diagnosis was made by assessing patients' complaints and the results of additional research methods (fibrogastroduodenoscopy (FEGDS) with biopsy). To obtain the normative indicators of the study, a group of 20 practical healthy students of the same sex and age was formed.

The study adhered to medical and diagnostic standards and requirements in relation to the ethical component of clinical trials (GCP, 1997). The patients signed their consent to participate in the study.

The content of 8-isoprostane (prostaglandin F_{2α} isoform (8-iso-PgF_{2α})), a product of free radical oxidation of arachidonic acid, was studied in blood serum by ELISA (Isoprostane (8-iso-PgF_{2α}) Serum, Tissue Elisa kit, BioAssay, USBiological, USA). Statistical data processing was made by the Statistica Basic Academic 13 for Windows En local.

Results and discussion. Results and discussion. The FEGDS performed allowed 34 patients to establish the erosive form of the disease; in 11 patients, non-erosive inflammation was observed. The presence of an active inflammatory process in the esophageal mucosa was also confirmed by the formation of esophagitis with the involvement of cells characteristic of this state (macrophages, basophils, plasma cells, etc.) in the inflammation focus.

The study of the level of 8-isoprostane in patients with GERD showed its increase, which was 3.4 times higher than the control values. Thus, in practically healthy individuals the level of 8-iso-PgF_{2α} was 2.12 (1.34; 2.89) pg/ml, and in the presence of the disease - 7.23 (5.96; 9.37) pg/ml, U = 426, p<0.01.

Differences in these indicators were determined when the morphological picture of the esophageal mucosa changed. So, in patients with an erosive form of the disease, this indicator was 9.11 (7.74; 10.12) pg/ml. The content of 8-isoprostane in patients with non-erosive GERD was 6.21 (5.24; 7.84) pg/ml, U=282, p<0.01. It should be noted that the number of erosions, the duration of the anamnesis of the disease and the sex of the subjects did not affect this indicator.

These changes in one of the indicators of the non-enzymatic link of the antioxidant system, in our opinion, can be explained as follows. 8-iso-PgF2 α belongs to the eicosanoid family, it is synthesized from arachidonic (eicosanic) acid - a fatty acid that is part of the phospholipids of cell membranes [5]. The development of GERD intensifies the processes of apoptosis and, thereby, the destruction of cells with an increased yield of these acids. In the erosive form of GERD, the participation of deep layers of the esophageal mucosa and the formation of a systemic inflammatory response are characteristic, which increases the content of 8-isoprostane. Consequently, an increase in the content of the non-enzymatic component in the blood serum of patients with GERD is natural, and the morphological form of the disease (erosive process) is supported by its pronounced negative dynamics.

Conclusions. Conclusions. The presence of GERD in students is accompanied by the activity of the non-enzymatic link of the antioxidant system, which is due to the development of an inflammatory reaction in the esophageal mucosa. The presence of an erosive form of GERD is accompanied by a more significant increase in the level of 8-isoprostane in comparison with non-erosive.

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TUMOR NECROSIS FACTOR ALPHA IN STUDENTS WITH GASTROESOPHAGEAL REFLUX DISEASE

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Relevance. The digestive system is one of the most frequent systems, changes in which are formed in the student environment. Diseases of the gastrointestinal tract in