(p <0.05). The ratio of transmitral blood flow phases in patients with coronary heart disease was disturbed – E / A <1, DT was increased (p <0.05), IVRT was delayed (p <0.05).

The study of the ratio of indicators of central hemodynamics and CSI markers revealed the inverse correlation between EF of the LV and TNFα (r = -0.340, p <0.05), EF of the LV and FG (r = -0.369, p <0.01), E / A and IL-1β (r = 0.333, p <0.05).

**Conclusion.** The obtained results demonstrate the negative effect of CSI on the systolic and diastolic function of the LV in patients with CHD with MS.

Prospects for further research. Further study of the levels of pro-inflammatory CKs and other markers of inflammation in patients with CA and CHD with MS can be the basis for constructing a diagnostic algorithm to determine the predictors of destabilization of the course and progression of this pathology for the development of optimal pathogenetically substantiated therapies.

**References:**


**Key words:** coronary heart disease, metabolic syndrome, chronic systemic inflammation, cytokines, central hemodynamics.

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**LEVELS OF TETANUS AND DIPHTHERIA SEROPROTECTION IN A COHORT OF UKRAINIAN HIV-INFECTED ADULTS**

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HIV infection is currently being considered as a chronic manageable disease due to the ascending efficacy of modern antiretroviral therapeutic regimens. Consequently, immunological prophylaxis of serious vaccine-preventable infections, diphtheria and tetanus in particular, among these patients is an issue of a growing importance. However, research data show that HIV-infected individuals experience a progressive loss of immune functions involving both T and B lymphocytes, with low memory B-cells rates even when being treated [1]. Accordingly, some studies reveal that they are at risk of a depleted seroprotection against the aforementioned infections [2]. The study objectives were to evaluate the state of post-immunization seroprotection against diphtheria and tetanus in HIV-infected adults in Ukraine.
Materials and Methods. We enrolled a total of 90 HIV-infected individuals aged 22-60 years who constituted the main study group. The controls were 49 immunocompetent volunteers of the corresponding age. To examine the seroprevalence of anti-diphtheria and anti-tetanus antibodies we performed ELISA testing using diagnostic test systems RIDASCREEN Diphtheria IgG and RIDASCREEN Tetanus IgG (R-Biopharm AG, Germany). Statistical processing was performed using the STATISTICA v.6.1 licensed software.

Results. Titers of anti-toxic antibodies in HIV-infected and immunocompetent adults were significantly different. So, the median for anti-diphtheria antibodies in HIV-infected individuals was 0.17 (0.09; 0.38) IU/ml, which was 6.1 times lower than in the control group: 1.03 (0.56; 1.27) IU/ml (p<0.001 by Mann-Whitney U-test). The median of anti-tetanus antibodies in the main group was 0.59 (0.28; 1.09) IU/ml versus 1.33 (1.13-1.45) IU/ml in controls, showing 2.3-fold decline in the former (p<0.001 by Mann-Whitney U-test). The proportion of diphtheria-unprotected individuals was 93.3% (n=84) in the main group; the proportion of tetanus-vulnerable individuals – 52.2% (n=47). There was no detectable association between the levels of antitoxic antibodies against diphtheria and tetanus and the number of CD4+ T-lymphocytes in HIV-infected adults. Conclusions. HIV-infected adults are a high risk group for potential diphtheria and tetanus as they have low specific immunity level. This jointly with poor epidemiological situation in Ukraine justifies mandatory vaccination against the infections given and the necessity of a further evaluation of the state of immune protection against other vaccine-preventable diseases such as measles in this cluster of population.

References.

Key words: HIV, diphtheria, tetanus, seroprotection, immunization

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CHANGE OF SHORT CHAIN FATTY ACIDS LEVEL IN COLON CANCER IN DEPEND FROM LOCALISATION OF TUMOR

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Short chain fatty acids (SCFA) stimulate the growth and renewal of mucosal cells, the formation of mucus, blood flow in the mucosa, increase the absorption of water and salts, regulate the acid-base balance, maintain microbial balance, block adhesion and inhibit the growth of pathogenic and conditionally pathogenic flora. Salts and esters of acetic acid participate in the supply of substrates of lipogenesis and energy supply of the epithelium, and also provide an antimicrobial effect, regulate pH, motor and secretory activity of the intestine [1]. Salts and esters of propionic acid regulate microcirculation in the mucous membrane and support trophic processes in it, participate in gluconeogenesis, and block the adhesion of pathogens to the epithelium [2]. Butyrate is an important factor in the regulation of proliferation and differentiation of the colon epithelium, which explains its anticarcinogenic activity [3]. The production of SCFA by colon microflora is one of the important mechanisms of self-regulation. The most effective method for the qualitative and quantitative determination of SCFA is