Association of intima–media complex with infectious, immune and inflammatory indices in persons at risk

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Thickness of intima-media complex (IMC) of carotid artery, lipid spectrum, blood level of C-reactive protein (CRP), cytokines TNFα, IL-1, IL-8, and IL-4, IgG antibodies to CMV, HSV-1, C. pneumoniae, indices of innate and acquired immunity were studied in 92 practically healthy patients aged 18–60, divided into 2 groups according to the absence or presence of risk factors (RF). Results. The increase in infectious burden by viruses (CMV, HSV-1) and C. pneumoniae is observed in persons with RF along with enlargement of IMC thickness, reduction of acquired immunity, increase in CRP and pro-inflammatory cytokines (IL-1, IL-8, TNFα). Cluster analysis demonstrated that IMD thickness is closely linked with a complex of factors — infectious, metabolic and immune. An increase in intracellular infections, reduction of adaptive immunity and activation of latent inflammatory process are registered in persons with RF. These processes are closely related to the arterial wall and can be a reason of vascular injury with development of atherosclerosis. (Cytokines and Inflammation. 2011. Vol. 10. № 4. P. 80–84.)

Key words: thickness of intima–media complex, latent intracellular infections, immune system.