

Ceruloplasmin (CP) is an important plasma antioxidant and a weak acute-phase reactant, and this is why its assessment allows evaluation of the level of antioxidant defence and the activity of the inflammatory process in the body.

**Objective.** To evaluate the effect of chronic heart failure (CHF) on ceruloplasmin plasma levels in HIV-infected patients.

**Methods.** A total of 240 HIV-infected patients were examined, 160 of them had signs of CHF. CP levels were measured in the plasma of all CHF patients and 30 healthy volunteers using RANDOX reagent kits on a biochemical analyser. The diagnosis of CHF was confirmed in accordance with the 2020 Clinical Guidelines of the Russian Society of Cardiology.

**Results.** The CP plasma level in healthy volunteers was  $388.9 \pm 18.7$  mg/L. The CP level in HIV-infected patients with CHF was significantly below the reference range: 137.0 [102.0; 155.5] mg/L. CP levels increased in the presence of chronic kidney disease and anaemia. The threshold CP level for the development of CHF with reduced ejection fraction was 233.5 mg/L (sensitivity 99%, specificity 90%).

**Conclusion.** CP plasma levels are significantly reduced in HIV-infected patients with CHF. Even against a background of low CP values, a tendency for CP to increase with worsening CHF severity is preserved. A plasma CP level of 233.5 mg/L increases the probability of CHF with Ejection Fraction (EF) < 40%. In patients with reduced left ventricular ejection fraction or NT-proBNP  $\geq 1500$  pg/mL, CP levels are somewhat elevated but remain below the reference limits. CP levels increase in the presence of chronic kidney disease and anaemia.