Секция «Тезисы на английском языке»

Thrombocytopenia as a predictive marker of higher mortality rate and more severe course of heart failure in patients with infective endocarditis

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Introduction. Infective endocarditis (IE) is an infectious disease of the cardiovascular system, in which the mortality rate remains at 30%, despite advances in diagnosis and treatment [1]. It is important to search for predictors determining treatment and the prognosis of the disease. One of the possible prognostic markers can be the platelet count, as according to literature data, low number of platelets associated with a more severe course of the infectious process [2].

Purpose: To study the features of thrombocytopenia in patients with IE.

Materials and methods. 156 patients with IE (Duke 2015) were included; of which 55 (35%) patients have IE with thrombocytopenia (group №1) and 101 (65%) have IE without thrombocytopenia (group №2). We evaluated the anamnesis, echocardiogram, heart failure (NYHA rates and NT-pro-BNP), inflammation markers (CRP, RF, procalcitonin, presepsin), microbiology tests, CBC (PLT, WBC, HB), embolic complications (EC) and mortality rates. Thrombocytopenia was characterized by total platelet count lower than $180*10^9$/l. EC was defined as any embolism at the moment of hospital admission or developed during hospitalization. All EC were verified by instrumental methods of diagnostics (US, CT, MRI).

Results. The median age in the group №1 was 42 [34; 66.5], in group №2 60 [36; 72] years, $p > 0.05$. Groups did not differ by gender and comorbidity. Acute IE prevailed in both groups [37 (67.3%) in group №1 vs. 53 (52.5%) in group №2, $p > 0.05$], left ventricular EF was mainly preserved [57% (54; 61) vs. 58% (50; 60), respectively, $p > 0.05$]. Mean platelet count in group №1 was $97*10^9$/l [71; 152], in group №2 $264*10^9$/l [214;336], $p < 0.001$. EC (N=68) were found in 29 patients in group №1 (52.7%), in 39 patients in group №2 (38.6%), $p = 0.048$. Also an increase in CRP value of 146.3 mg/l [83.4; 210.5] for group №1 and of 108.9 mg/l [41.8; 190.0] in group №2, $p < 0.001$, was revealed and associated with the severity of thrombocytopenia ($p = 0.011$). Thrombocytopenia in patients with IE is associated with more severe course of heart failure, p=0.038. 55 patients (100%) in group №1 and in 43 patients in group №2 (42.6%), $p < 0.001$ had clinical symptoms of class III-IV heart failure. Overall mortality was higher in patients with low total platelet count: in group №1 N = 20 (36.4%), in group №2 N=19 (18,8%), p=0.0014.

Conclusion. IE complicated by thrombocytopenia is associated with more severe course of heart failure and higher activity of the infectious process. Mortality rate, as well as frequency of EC in such patients is also significantly higher.

Источники и литература

1) Cahill T. J., Prendergast B. D. Current controversies in infective endocarditis //F1000Research. – 2015. – V. 4.
2) Tsirigotis P. et al. Thrombocytopenia in critically ill patients with severe sepsis/septic shock: Prognostic value and association with a distinct serum cytokine profile //Journal of critical care. – 2016. – V. 32. – 9-15p.