

Category : **Cardiovascular: Other**

**A78 - Role of n-terminal pro-b-type natriuretic peptide in early surgery of infective endocarditis due to acute heart failure**

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**Introduction:**

We assessed the role of N-terminal pro-B-type natriuretic peptide (NT-proBNP) levels in patients hospitalized for infective endocarditis(IE) for emergent valve surgery due to acute heart failure(AHF).

**Methods:**

The study enrolled 100 patients, who underwent valve surgery for IE between 2019 and 2021. All patients were divided into groups according to the degree of preoperative heart failure by NYHA classification. For each group the limit values of NT-proBNP were determined. The predictors of AHF were analyzed, and clinical results of patients with non-AHF (n=44) were evaluated and compared.

**Results:**

Inflammatory pathology of the lungs (odds ratio [OR] 3,37; P=0.003), aortic valve infective endocarditis(OR 2.97; P=0.003), nosocomial infective endocarditis (OR 2,14; P=0.049), vancomycin resistance(OR 2,25; P=0.032) , linezolid resistance(OR 2,34; P=0.026) were risk factors for preoperative AHF in patients with IE. Limit values of NT-proBNP in the preoperative period in patients with IE depending on the class of NYHA: group I (n = 20) - less than 300 pg / ml, group II (n = 24) - 351-1500 pg / ml, group III ( n = 31) - 1501-6500 pg / ml, group IV (n = 25) - more than 6500 pg / ml. Clinical signs of AHF were detected in 11 (35%) patients in group III with an average value of NT-proBNP -  $3190.4 \pm 280.8$  pg / ml. In group IV with an average value of NT-proBNP -  $20150.3 \pm 1961.2$  pg / ml - preoperative AHF had 16 (64.0%) patients. The correlation analysis revealed a significant relationship between the degree of preoperative AHF and hospital mortality: in group III hospital mortality was - 2 (6.5%) cases, in group IV - 3 (12%) cases ( $X^2 = 18.42$ ,  $p < 0,001$ ).

**Conclusion:**

Estimation of the NT-proBNP level allows timely hospitalization and assessment of patients with infective endocarditis, offers adequate preoperative preparation in the intensive care unit with consequent emergent cardiac surgery.