

229. FACTORS WHICH INFLUENCE MORTALITY IN PATIENTS WITH INFECTIVE ENDOCARDITIS

Author: **Ion Proca**

Co-authors: Cătălina Bajura, Platon Daniel

Scientific adviser: Grejdieru Alexandra, MD, PhD, Associate Professor, Department of Internal Medicine, Cardiology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova, Samohvalov Elena MD, PhD, Associate Professor, Department of Internal Medicine, Cardiology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova.

Introduction. Infective Endocarditis (IE) is a severe rising incidence pathology with high mortality. The incidence of IE is 3-10 cases per 100,000 people/year. The most common complications in IE that lead to death are: Congestive Heart Failure (CHF) - 33.4%, stroke 17.9%, and embolic events - 34.3%. Early and adequate initiation of antibiotic therapy significantly reduces mortality by 25-50%, and the frequency of embolic events in 13 patients out of 1,000 in the first week of treatment and 1.2 to 1,000 after two weeks of appropriate treatment, and early surgery can improve the evolution of EI. with an estimated overall survival of $74.8 \pm 4.1\%$ at 10 years. Despite improvements in the diagnosis, treatment and management of EI, the pathology remains associated with severe complications and high mortality.

Aim of the study. The purpose of the research is: to evaluate the factors which influence mortality in patients with Infective Endocarditis in Republic of Moldova.

Materials and methods. There were retrospectively evaluated 161 patients with clinically definitive diagnosis of IE according the Duke and J. Li criteria, admitted between 2013 - 2019 at the Institute of Cardiology and Municipal Hospital „Holy Trinity”, Chisinau, Republic of Moldova. Patients were divided in two groups deaths (D) 31 (19.3%) and alive (A) 130 (80.7%). The following characteristics were studied: age, gender, type of IE, injection drug use, Diabetes Mellitus, haemoculture, presence of *Staphylococcus aureus*, vegetations and their features, C-reactive protein, ASL-O, left ventricular ejection fraction and other complications. Data collection was based on the review of available medical charts, reports from the echocardiography laboratory, and accessible valve surgery reports during the study period. Data analysis was performed with statistical software Epi Info (CDC, Atlanta, ver. 7.2.2.16). Odds Ratio (OR) is used to estimate the strength of the association between risk factors, and outcomes of mortality, so $OR > 1$ means that the risk of the outcome is increased by the exposure. Variables were compared using two-tailed t-test and statistical significance was defined by $p \leq 0.05$.

Results. The most affected age in both groups was 45-64 years, 51.6% for group D, and 56.2.4% for group A, with a mean age of 57.7 ± 12.3 years for group D and 51.3 ± 13.7 years for group A. Nevertheless, the cases of death exceeded in group >65 years 29% vs 16.9% (OR 2.0; 95% CI, 0.82-4.94; $p = 0.124$). In both groups prevailed men with 64.5% and respectively 76.2%, but it is observed an increase of prevalence to 35.5% for women in group D (OR 1.8; 95% CI, 0.76-4.06; $p = 0.184$). Acute onset IE was more frequently in group D 41.9% vs 37.7 in group A (OR 1.2; 95% CI, 0.54-2.65; $p = 0.890$), as well prosthetic valve IE (PVIE) 16.1% vs 12.3% (OR 1.4; 95% CI, 0.46-4.07; $p = 0.570$). Diabetes mellitus predominated in group D 29% vs 12.3% in group A (OR 4.0; 95% CI, 1.51-10.7; $p < 0.05$). Blood culture was positive in 51.6% of patients in group D and 23.8% in group A (OR 3.4; 95% CI, 1.51-7.67; $p < 0.05$), and prevailing in both groups *Staphylococcus aureus* (OR 4.4; 95% CI, 1.47-13.42; $p < 0.05$) and

Staphylococcus epidermidis (OR 4.7; 95% CI, 1.09-19.83; $p < 0.05$) as pathogens. We observed in both groups vegetations in more than 70% of patients, but in the group D, 19.4% vs 14.6% were affected more valves, with predominating in group D middle size vegetations 32.3% vs. 23.1% (OR 1.6; 95% CI, 0.67-3.73; $p = 0.287$) and big size 12.9% vs 6.9% (OR 1.9; 95% CI, 0.57-6.95; $p = 0.272$). The most affected valves in group D was the tricuspid one 12.9% vs 11.5% (OR 1.1; 95% CI, 0.35-3.69; $p = 0.832$). Group D had an increased rate of CHF 61.3% vs 53.8% NYHA class III (OR 1.4; 95% CI, 0.61- 3.02; $p = 0.453$) and class IV 25.8% vs 10.8% (OR 2.9; 95% CI, 1.08-7.66; $p < 0.05$). Embolic events occurred in 61.3% in group D and in 14.6% of patients in alive group (OR 9.3; 95% CI, 3.87-22.1; $p < 0.001$). Also, the renal damage was higher in group D, Acute Kidney Failure (AKF) 12.9% vs 3.1% (OR 4.7; 95% CI, 1.09-19.83; $p < 0.05$), Chronic Kidney Disease (CKD) 38.7% vs 9.2% (OR 6.2; 95% CI, 2.44-15.8; $p < 0.001$). Septic shock (SS) was more frequently in group D 29% vs. 4.6% (OR 8.5; 95% CI, 2.74-26.1; $p < 0.001$).

Conclusions. According to Odds Ratio we found in our study 36 factors that can influence mortality in patients with infective endocarditis, nevertheless only 17 of them proved to have statistical significance difference. Therefore, these factors in our study were: Diabetes Mellitus (OR 4.0; 95% CI, 1.51-10.7; $p < 0.05$); positive blood culture (OR 3.4; 95% CI, 1.51-7.67; $p < 0.05$); *Staphylococcus aureus* (OR 4.4; 95% CI, 1.47-13.42; $p < 0.05$); *Staphylococcus epidermidis* (OR 4.7; 95% CI, 1.09-19.83; $p < 0.05$); Congestive Heart Failure class IV NYHA (OR 2.9; 95% CI, 1.08-7.66; $p < 0.05$); embolic events (OR 9.3; 95% CI, 3.87-22.1; $p < 0.001$) with the following clinically most important pulmonary embolism (OR 6.2; 95% CI, 2.17-17.9; $p < 0.001$), stroke (OR 3.7; 95% CI, 1.17-11.5; $p < 0.05$), Acute Kidney Failure (OR 4.7; 95% CI, 1.09-19.83; $p < 0.05$), Chronic Kidney Disease (OR 6.2; 95% CI, 2.44-15.8; $p < 0.001$) and Septic shock (OR 8.5; 95% CI, 2.74-26.1; $p < 0.001$).

Key words: cardiology, Infective Endocarditis, mortality

230. THE TREATMENT OF DYSLIPIDEMIA IS INFLUENCED BY THE GENETIC MARKERS OR NOT

Author: **Artiom Țurcan**

Co-authors: Ana Țurcan

Scientific adviser: Liviu Grib, MD, PhD, University Professor, Lucia Mazur-Nicorici, MD, PhD, Associate Professor, Department of Internal Medicine, Cardiology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova.

Introduction Cardiovascular disease is the leading cause of morbidity and mortality in working-age patients. In the Republic of Moldova, 59% of mortality cases are due to cardiovascular diseases. In 29.4% of the adult population, have cholesterol levels above the normal limits, the latter being associated with the increased risk of cardiovascular deaths. Atherosclerosis and its most common consequences - ischemic heart disease and stroke - are and will continue to be the leading cause of death in the world for at least 20 years. Laboratory examinations on the lipid spectrum of the rural population of the Republic of Moldova included in the CINDI study found that 32.5% of people had hypercholesterolemia. For the reduction of blood levels of total cholesterol and LDL-cholesterol, statins, bile acid sequestrants and selective cholesterol absorption inhibitors are indicated. Initiation of a drug treatment with preparations that reduce lipids in the blood can lead to possible side effects. Patient compliance