

Despite more recent advances in both medical and surgical therapies, the syndrome of infective endocarditis (IE) continues to be characterized by serious complications, and remains a life-threatening infection. According to data from the World Health Organization, the Czech Republic has one of the highest mortality rates due to this disease worldwide. Despite the severity of illness in this country, very few data have been reported previously regarding investigations of IE in the Czech Republic. Consequently, a retrospective evaluation of local IE cases at one of the country's largest medical centers was conducted.

Our aim was to analyze the characteristics of this disease in our country. The greatest interest was devoted to *Staphylococcus aureus* (*S. aureus*), etiological agent that has been associated with the worst course of IE episodes. The hypothesis of our study was that infective endocarditis caused by *S. aureus*, in comparison with other etiological agents, is associated with worse course of the disease. We evaluated the structural (abscess formation, impaired integrity of heart valves, systemic embolism) and functional (incidence of heart failure and conduction disturbances, in-hospital mortality) manifestations of IE.

Of all studied parameters, only embolism and *S. aureus* as the causative agent were predictors of in-hospital mortality. Patients from *S. aureus* group were at 2.7x higher risk of in-hospital mortality compared with a group of other agents. Patients with embolism regardless of the causative agent had 4.2x higher risk of in-hospital mortality compared with patients without embolism. And finally the group of patients simultaneously with *S. aureus* infection and embolism were at 11.3x higher risk of in-hospital mortality compared with a group of other agents and at the same time without embolism. Relationship between the length of vegetation and embolic episodes was not observed ($p=0.43$).