Introduction: 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.

Aims and methods: A study of local IE cases was conducted in two leading Cardiac centres in the Czech Republic. The main objective was to analyse the features of this disease and, at the same time, to identify predictors that are associated with the development of acute complications and worse survival of patients with IE.

Results: Infection of the aortic prosthesis was a significant predictor of paravalvular spread of infection (OR 6.706). Infection caused by *Staphylococcus aureus* (OR 8.459) and smoking (OR 8.403) were associated with a more frequent development of septic shock (OR 8.403). The most potent risk factors of possible embolization were mitral valve vegetation ≥ 13 mm (OR 3.59) and IE caused by *Staphylococcus aureus* (OR 3.24). The size of the vegetation was not only associated with the risk of embolization itself but also with a local destructive effect in the form of a new prolapse/perforation of the valve (OR 1.055). The importance of cardiac surgery and its relation to patients' survival has been demonstrated in all segments of our work - hospital mortality, 6-month mortality and long-term survival. Benefit of cardiac surgery was predominantly expressed in patients with *Staphylococcus aureus* infection who even had a 4.25x less risk of a 6-month mortality than operated patients with other infection than Staphylococcus aureus.

Conclusion: Accurate and early prediction of IE complications may lead to a reduction of still extremely high mortality rate of this disease. The individual detailed stratification of the risk of conservative and surgical treatment, particularly in patients with Staphylococcus aureus, is of major importance.