

# Summary

Cardiovascular diseases are some of the most common health and society problems in the present population. The question of influencing cardiovascular diseases by the state of oral health has been discussed for a long time. Opinions on this issue have undergone long-term development. The state of oral health influencing the overall health has been overestimated and underestimated over the years.

This thesis has summarized contemporary knowledge of the metastatic opportunistic infection of oral etiology and evaluated the state of oral health of 187 patients from the Department of Stomatology, Faculty of Medicine and University Hospital in Pilsen, Charles University, who were examined by a dentist as a part of the preoperative examinations before planned cardiac surgery in 2015–2018.

The experimental part of the study was focused on the detection of oral bacteria on pathologically changed heart valves from 41 patients operated on the Department of Cardiosurgery, Faculty of Medicine and University Hospital in Pilsen, Charles University.

The summary of the results of the prospective epidemiological study of 187 patients undergoing a planned cardiosurgical operation has brought information about the neglected state of oral health of these patients. More than half of the examined patients (64.17%) were at risk of metastatic opportunistic infection of oral etiology. One of the most important findings of the study was the time interval between dental examination and cardiac surgery, which was 13 days. The results of the experimental part of the study confirmed the presence of bacterial genetic information on extracted pathologically changed heart valves in 21 patients (of 41 patients) using molecular genetic tests, three typically oral pathogens were found among the detected bacteria. The clinical study revealed the very poor state of oral health in patients undergoing cardiac surgery and the experimental part of the study confirmed the occurrence of bacteria from the oral cavity on the heart valves.

The thesis emphasizes the insufficient state of oral health leading to a higher risk of metastatic opportunistic infection in patients with cardiovascular disease. Oral health should be considered an important factor affecting overall health.