Abstract
The aim of the thesis was to determine the microbial colonization at the injection site of central venous catheter and its possible influence to maintain the lowest incidence of catheter sepsis. The culture results of skin swabs and taken blood cultures from two groups of patients were compared with each other using qualitative analysis methods. Those were Intensive Care Unit patients with established central venous catheter. The result was the discovery of microbial colonization of the skin and the representation of different pathogenic strains at the site of a central venous catheter for both established groups. Further showed that the higher the risk of microbial colonization with symptoms of catheter sepsis was seen where patients have central venous catheter established for longer period of time and have been treated under home parental nutrition program with stoma. The recommendation is the continuous education of health professionals to act in accordance with the latest preventive treatment recommendations, and the emphasis is mainly placed on hands cleaning and disinfecting as the hands of health professionals are one of the most common and risky way of transmission of pathogenic strains with potential nosocomial infection formation. Aseptic principles must be repeatedly communicated to all patients using professional education.

Keywords: sepsis, aseptic access, intensive care, blood cultures, central venous catheter