

ABSTRACT

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Title of diploma thesis: Current possibilities of laboratory diagnostics of septic state

The aim of the thesis is to conduct a literature search on the causes of septic conditions, their laboratory and clinical diagnosis and treatment. Furthermore, the aim is to compare laboratory markers for the early detection of sepsis and statistically evaluate the results.

The theoretical part deals with the history and development of the definition of sepsis, pathophysiology of septic conditions, their causative agents, risk factors and therapy. Furthermore, it comprises clinical and laboratory diagnostics with emphasis on the description of currently used and potential biomarkers for the diagnosis of sepsis.

The practical part consists of statistical analysis of the dependence of selected hematological parameters Ret-He, ICIS score, NLR ratio and biochemical parameters PCT, CRP and IL-6 on the incidence of sepsis or SIRS in the studied group of patients. For all selected parameters, a statistically significant difference was found between the values of the parameter in patients with sepsis or SIRS and those without sepsis or SIRS. Statistically significantly lower Ret-He concentrations were found in both groups of patients with sepsis and with SIRS. For the parameters ICIS score, NLR, IL-6, CRP and PCT, statistically significantly higher values were found in the group of patients with sepsis as well as in the group of patients with SIRS.

Keywords: sepsis, SIRS, ICIS score, biomarker, Sysmex XN-3000, COBAS 8000