ABSTRACT

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Title of diploma thesis: Determination of biochemical parameters and their diagnostic and prognostic value in sepsis

Sepsis is a relatively common complication that may be signed by the increased mortality of patients. It affects all ages, regardless of gender. Occurrence is more frequent in polymorbid and immunosuppressed patients. The most effective method to prevent the development of septic complications is quick and accurate diagnosis.

In the period from 1.6.2012 to 01.4.2014, we observed 697 patients hospitalized due to the development of septic complications and we analyzed statistically tracked markers: presepsin, procalcitonin, C - reactive protein, interleukin - 6, lactate, D – dimer, fibrinogen and quantity of leukocytes to determine their predictive and diagnostic value. Largest correlation was observed between comparison of presepsin with procalcitonin and presepsin with C - reactive protein, which reflected rapidly changing status of patients. Moderate correlation was observed in lactate, interleukin - 6, D – dimer concentration and leukocyte count. Between the development of sepsis and fibrinogen we did not find any significant correlation.

After dividing patients into groups according to the initial diagnosis, we found significant differences between the group of cancer patients and groups of patients with metabolic, cardiovascular and infectious diagnoses. In cancer patients there was statistically significant decrease in all observed parameters despite a developing sepsis.

We illustrated on the four case reports that high variability of biochemical markers in the monitoring of patient's condition requires necessary combination of analyzed parameters instead of monitoring condition with only a few markers.

Key words: Laboratory diagnosis, sepsis, biochemical markers, presepsin, procalcitonin