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**Title:** Thrombin generation test – As a potential marker of severity and outcome of severe pneumonia with pulmonary sepsis

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**Body:** Background. There is an important interaction between inflammatory mechanisms and coagulopathy in severe pneumonia (SP) with pulmonary sepsis. The aim. Determine the prognostic role of thrombin generation test (TGT) as a marker of severity in patients with SP with sepsis. Materials and Methods. 35 adults (18 years old or above) with SP and pulmonary sepsis were enrolled in the study. All patients were divided into two groups: survivors – 30 patients (85,7%, group 1) and died – 5 (14.3%, group 2) and stratified according to APACHE II score. Results. According to TGT, the greater number of patients (84.6%) showed reduction in intensity of thrombin generation. We observed lengthening of Lag time of thrombin, reduction of Peak thrombin, and increase in ttPeak, and in general - reducing endogenous thrombin potential (ETP) (table 1). Analysis of the average of the absolute values of thrombin generation curve showed that mean values of ETP and Peak thrombin remain below the reference in both groups, and Lag time and ttPeak - higher than in control. In group 2, in comparison with the first one, peak thrombin was lower at 82,9%, ttPeak was shorter by 15.1%, and ETP was reduced 3.9-fold. When comparing patients according to severity, in group with APACHE II >20 (compared with APACHE II <10), reduced Peak thrombin by 71.8% and ETP by 58.2% were defined, while lengthening lag time at 70.7% and increasing ttPeak by 234.4%. Conclusion. According to our preliminary data, reducing the intensity of TGT in SP with pulmonary sepsis is associated with more severe course of the disease and can be regarded as a predictor of poor outcome.