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## USEFULNESS OF PRESEPSIN (PSP) FOR ASSESSMENT OF SEPSIS IN LEUKOPENIC PATIENTS (PTS)

P. Makarova 1, G. Galstyan 2, A. Krechetova 3, E. Gemdjian 4, D. Tichomirov 5, E. Parovichnikova 6

1 Scientific Center for Hematology, ICU, Moscow, Russian Federation,

2 Scientific Center for Hematology, Moscow, Russian Federation,

3 Scientific Center for Hematology, Lab of ICU, Moscow, Russian Federation,

4 Scientific Center for Hematology, Lab of Statistic, Moscow, Russian Federation,

5 Scientific Center for Hematology, Lab of Virology, Moscow, Russian Federation,

6 Scientific Center for Hematology, Dept of Hematology, Moscow, Russian Federation

**INTRODUCTION.** PSP (sCD14-ST) is a soluble N-terminal fragment of the protein CD14. Recently PSP considered as an early marker of sepsis. However, most of the studies were performed at pts without leukopenia.

**OBJECTIVES.** To evaluate whether PSP is a useful biomarker for assessing the severity of sepsis and organ dysfunction in leukopenic pts with septic shock (SS).

**METHODS.** 27 leukopenic pts (WBC  $< 0.5 \times 10^9/l$ ) were enrolled in the study: 15 leukopenic pts with SS and 12 leukopenic pts without infection. In pts with SS plasma levels of PSP, procalcitonin (PCT), interleukin-6 (IL-6), and C reactive protein (CRP) levels were measured on admission and after 2, 3, 7, 14, 21 and 28 days. Also, SOFA and APACHE II scores were calculated at the same time. 28-day all-cause mortality was assessed. Plasma levels of PSP, PCT, IL-6 and CRP in pts without infection («normal ranges») were assessed once.

**RESULTS.** PSP, PCT, IL-6 and CRP levels were elevated in pts with SS in comparison with pts without infection. PSP levels in survivors and non-survivors did not differ on the first day of SS. However, PSP levels in survivors were significant lower than in nonsurvivors on the 2, 3, 7 days of SS (2208 pg/ml vs 4790 pg/ml, 2085 pg/ml vs 4920 pg/ml, 993 pg/ml vs 7972 pg/ml respectively,  $P < 0.05$ ; median test). PSP levels did not correlate with PCT levels and WBC counts. PSP levels correlated with CRP ( $R = 0,4292$ ,  $p < 0,001$ ) and IL-6 ( $R = 0,4717$ ,  $p < 0,001$ ) levels, plasma antithrombin III activity ( $R = -0,3192$ ,  $p = 0,018$ ), duration of XIIa-dependent fibrinolysis ( $R = 0,4121$ ,  $p = 0,001$ ), SOFA score ( $R = 0,6124$ ,  $p < 0,001$ ) and APACHE II score ( $R = 0,6513$ ,  $p = 0,001$ ).

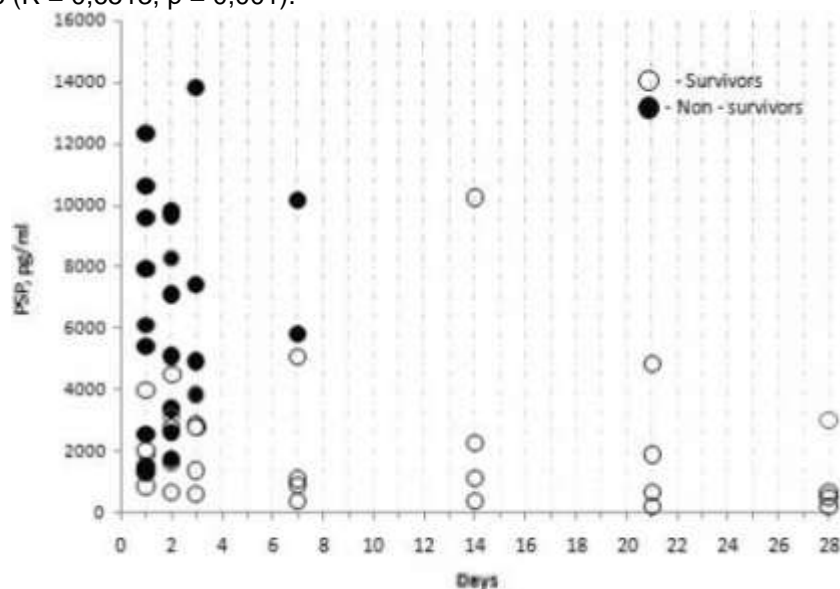


Fig.1. PSP levels in leukopenic pts with septic shock

**CONCLUSIONS.** Despite a leukopenia, plasma PSP levels can be used for an assessment of severity of SS and organ dysfunction.

**REFERENCE.** [1] Masson S, Caironi P, Spanuth E, et al. Presepsin (soluble CD14 subtype) and procalcitonin levels for mortality prediction in sepsis: data from the Albumin Italian Outcome Sepsis trial. Crit Care. 2014;18(1):R6.