

Evaluation of serum SuPAR levels in sepsis and septic shock patients in terms of diagnosis and prognosis

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Sepsis is accompanied by physiological, pathological, biochemical abnormalities induced by infection and is a public health problem. It is the leading cause of mortality. Septic shock is defined as the need for a vasopressor to keep the mean arterial pressure above 65 mmHg and serum lactate level above 2 mmol / L (> 18 mg / dL) in the absence of hypovolaemia.

SuPAR (soluble urokinase-type plasminogen activator receptor) plays a role in the migration of cells such as monocytes, macrophages from the circulation to the tissues.

In this study, the effects of SuPAR on sepsis and septic shock diagnosis and prognosis were evaluated by comparison with the currently used CRP (C-reactive protein), PCT (procalcitonin), APACHE 2 score of sepsis and septic shock patients enrolled in intensive care unit.

Statistical analysis was performed using the SPSS 21.0 program.

Categorical variables were compared with Pearson Chi-square, Yates corrected Chi-square and Fisher tests and Continuous variables were compared with nonparametric tests (Mann-Whitney U test and Kruskal-Wallis test) since did not fit normal distribution. The relationship between variables was assessed using the Spearman Correlation Test. The decision-making characteristics of the variables were examined by ROC curve analysis.

In our study, serum SuPAR levels were significantly higher in patients with sepsis (n = 26) and septic shock (n = 23) compared to healthy controls (n = 25). The serum SuPAR levels were similar in the survivors and nonsurvivors at the end of the 7 day / 28 day follow-up and in the intensive care unit. When all groups were taken into consideration, we determined significant correlations between the levels of SuPAR and CRP, PCT. There was no correlation between variables in patient groups.

Our findings suggest that SuPAR may be used to diagnose sepsis and septic shock, but not enough to discriminate between sepsis septic shock and predict prognosis.