



Spotlight on Special Topics

SERUM BIOMARKERS IN MORTALITY RISK STRATIFICATION IN PATIENTS, HOSPITALIZED WITH COVID-19 PNEUMONIA IN EARLY AND REMOTE PERIOD

Poster Contributions

For exact presentation time, refer to the online ACC.22 Program Planner at <https://www.abstractsonline.com/pp8/#!/10461>

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Authors: *Naufal Zagidullin, Gumerov Ruslan, Tyurin Anton, Davtayn Paruir, Dozhdev Sergey, Lakman Irina, Pavlov Valentin, Bashkir State Medical University, Ufa, Russian Federation*

Background: SARS-CoV-2 damages not only the respiratory, but also the cardiovascular system and vascular endothelium in particular. Some serum cardiovascular biomarkers were shown to be effective in cardiovascular events risk stratification in such patients. The goal was in hospitalized patients with COVID-19 to investigate the efficacy of serum biomarkers in the stratification of mortality risk in 28 days and in 1 year follow-up (FU).

Methods: In 280 patients (age 59.0±3.4, 119 men, 171 women), hospitalized with COVID-19-associated pneumonia, at the 1st day of hospitalization the concentration of ST2, TnI and VCAM-1 biomarkers were estimated in the blood serum. The endpoint mortality was registered in 28th days and in 1 year after hospitalization. ROC analysis's mortality cut-off values were estimated for all 3 biomarkers at 28th day and in 1 year after hospitalization and the odds ratios (OR) were calculated by means of univariant models of logistic regression at that time intervals.

Results: 11 patients (74.0 years, 5 men, 3.9%) died within the first 28 days from current hospitalization and another 11 (71.4, 6 men, 4.1%) - within the 1-year of FU. Both TnI (cut-off point > 0.14 ng/ml, sensitivity 45.5%, specificity 78.8%, 100% prediction, p<0.001) and VCAM-1 (>16.8 ng/ml, 100.0%, 71.4%, OR=1.022, p=0.025) predicted 28-day mortality, but ST2 only (> 56.6 ng/ml, 81.8%, 81.8%, OR=1.048, p=0.03) - in 1-year period.

Conclusion: Cardiovascular biomarkers TnI (>0.14 ng/ml) and VCAM-1 (>16.8 ng/ml) were shown to have prognostic efficacy in mortality stratification in hospitalized patients with COVID-19 early (28 days) and ST2 (>56.16 ng/ml) - in remote period (1 year).