

Title: PROCALCITONIN LEVELS AND SOME HEMOSTASIS INDICATORS AS PROGNOSTIC MARKERS

Author(s): Pham Tuan An¹

Tutor(s): Ivanytska T.A¹

Affiliation(s):

¹Poltava State Medical University

INTRODUCTION: Diabetes mellitus is recognized as one of the main comorbid pathologies that contribute to the severe course and unfavorable prognosis in patients with acute respiratory viral disease COVID-19. It is suggested that this development is associated with an imbalance between the coagulation system and fibrinolysis, which increases the likelihood of thromboembolism in these patients. This leads to further careful study of some indicators of hemostasis.

AIM OF THE STUDY: Analyze changes and determine the association between the level of D-dimer, platelets, procalcitonin and hospitalization rates and unfavorable prognosis in patients with acute COVID-19 in the presence of diabetes and without it.

MATERIALS AND METHODS: An analysis of 102 case histories of patients with COVID-19 (mean age 69.5 ± 8.98 years), who were treated at the CP "3rd City Clinical Hospital of Poltava City Council". For comparison, two groups were formed: the main (44 patients with concomitant diabetes) and the comparison group (58 patients without diabetes). The gender and age structure of the groups did not differ significantly. The evaluation of the obtained data was performed using generally accepted statistical methods.

RESULTS: The D-dimer index in the group with diabetes was significantly higher ($p = 0.017$) than in the comparison group. The level of procalcitonin in the group of patients with diabetes was increased (2.8 ± 0.95 ng / ml) compared with the other group (1.17 ± 1.06 ng / ml) ($p = 0.035$). The percentage of patients hospitalized in the intensive care unit patients with comorbid diabetes was 65% versus 47%. The mortality rate in patients of the main group was significantly higher compared to the group without diabetes ($p = 0.022$). A strong direct relationship was found between D-dimer and mortality ($r = 0.72$), procalcitonin and mortality ($r = 0.75$).

CONCLUSIONS: Determination of the level of D-dimer, platelets, procalcitonin are reliable parameters for assessing the severity of the disease and predicting mortality in patients with COVID-19, especially in combination with diabetes. The presence of this comorbid pathology significantly complicates the course and prognosis in patients with acute respiratory viral disease COVID-19. It should be noted that thrombocytopenia on the background of high D-dimer was associated with mortality.