

GENDER-SPECIFIC MORTALITY PREDICTORS IN PATIENTS WITH SEVERE COVID-19: A CRITICAL CARE PERSPECTIVE

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Objective: The aim of this study was to assess factors associated with the risk of death in men and women individually and shed light on new aspects.

Patients and methods: This retrospective cohort study was carried out at two healthcare institutions in Serbia, involving 457 patients. Patients were categorized based on their gender. The primary study endpoint was survival, specifically patient mortality. Demographic and clinical information were retrieved from electronic health records.

Results: Among men, 11.4% required treatment in the intensive care unit (ICU), with a 5.7% mortality rate. Multivariate analysis confirmed associations with ICU mortality, including longer hospitalization ($p=0.010$), non-vaccination ($p=0.024$), obesity ($p=0.013$), elevated levels of lactate dehydrogenase ($p=0.048$), C-reactive protein ($p=0.041$), aspartate aminotransferase ($p=0.008$), interleukin-6 ($p=0.019$), and lower lymphocyte counts ($p=0.043$). For women, 16% required ICU treatment, with an 8.6% mortality rate. Multivariate analysis confirmed associations with ICU mortality, including longer hospitalization ($p=0.014$), non-vaccination ($p=0.019$), chronic kidney disease, elevated levels of lactate dehydrogenase ($p=0.012$), creatinine ($p=0.015$), C-reactive protein ($p=0.015$), interleukin-6 ($p=0.019$), lower lymphocyte counts ($p=0.077$), and erythrocyte counts ($p=0.033$).

Conclusion: Survival in severe COVID-19 is similar between genders, but specific risk factors vary. Prolonged hospitalization, low lymphocyte count, high biomarker levels, and vaccine avoidance contribute to mortality in both genders. Men face risks from obesity and elevated AST levels, while women face risks from lower erythrocyte counts and CKD. This highlights the need for a gender-specific approach in managing fatal COVID-19.

Keywords: COVID-19, gender, mortality, severity, prediction