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Cardio-metabolic factors associated to mortality in patients with COVID-19

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Abstract

Background. In March 2020, Guatemala reported the first case of coronavirus disease 2019 (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Epidemiological and clinical characteristics of patients with COVID-19 have been reported, but cardio-metabolic risk factors for mortality have not been correctly described. **Objective.** To evaluate the independent cardio-metabolic risk factors associated with mortality at 28 days after hospital admission in patients with a diagnosis of COVID-19 admitted to the Critical Care Unit of the Guatemalan Institute of Social Security, Guatemala. **Population and methods.** Two hundred patients admitted to the Critical Care Unit of the Guatemalan Social Security Institute, between May 1, 2021, and June 30, 2021, were included. Different factors were analyzed in bivariate analysis, and only those variables in which an association was found were included in a multivariate analysis of binary logistic regression. **Results.** The variables included in the binary logistic regression analysis were age, arterial hypertension, glycosylated hemoglobin, erythrocyte sedimentation rate, glycemic variability, fibrinogen, D-dimer, Interleukin-6 (IL-6), vasopressor use. It was documented that the model predicts between 28-38% of the variability of the data according to Cox and Snell's and Nagelkerke's R-squared. Subsequently, an analysis was performed using the area under the ROC curve (area=0.82; 95%CI= 0.76-0.88; $p<0.05$). **Conclusions.** Despite the variables studied, further studies are required to determine other factors that influence patient prognosis.

Funding and Conflicts of Interest

None