

Prevalence of Modified Risk Factors in COVID-19 Patients Admitted to Intensive Care Unit in Kingdom of Bahrain

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ABSTRACT

Objective: The objective of this study was to examine the prevalence of modifiable risk factors associated with intensive care unit (ICU) admission and their impact on outcomes at the Hereditary Blood Disorder Center (HBDC) in Bahrain during the period from March 2020 to March 2021. The purpose of this analysis was to generate valuable data for health educators and authorities.

Materials and Methods: This retrospective cross-sectional observational study aimed to investigate the prevalence of modifiable risk factors among 320 laboratory-confirmed COVID-19 patients admitted to the Intensive Care Unit (ICU) at the Hereditary Blood Disorder Center (HBDC) in Bahrain during the peak period of COVID-19 from March 2020 to March 2021 which. Descriptive and univariate and multivariate analyses were employed to explore the prevalence of these risk factors among ICU patients and to assess their association with patient outcomes.

Results: A study of 320 COVID-19 patients admitted to the ICU found that the mean age was 53.7 years old, 30.9% were male, and 97.8% were not vaccinated. The most common risk factors were hypertension (44.4%), diabetes (40.3%), dyslipidemia (31.9%), and smoking (15.9%). 16.9% (54 patients) died due to COVID-19 or its complications. In the univariate analysis, patients older than 60 years old were more likely to die than patients younger than 60 years old ($P = 0.001$). Hypertensive patients were also more likely to die than non-hypertensive patients ($P = 0.003$), as were patients with dyslipidemia ($P = 0.03$). The patient's gender, vaccination status, smoking, and diabetes status were not associated with the patient's final outcome. In the multivariate analysis, the only significant risk factor for death was being 60 years old or older ($P = 0.048$). Hypertension and dyslipidemia were not significant risk factors in the multivariate analysis.

Conclusion: The study found that older age was the most significant risk factor for death in COVID-19 patients admitted to the ICU. Hypertension and dyslipidemia were also associated with an increased risk of death in the univariate analysis, but this association was not significant in the multivariate logistic regression analysis.

Keywords: COVID-19, Intensive Care Unit, Risk Factors, Bahrain

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