# Evaluation of clinical and laboratory findings in intubated COVID-19 patients admitted to intensive care units of Ardabil Imam Khomeini Hospital from April to September 2020

**Abstract**

**Background**: The new acute respiratory syndrome of coronavirus 2 has led to a new and deadly disease called coronavirus-2019 (COVID 19). Although many studies have been performed on COVID 19 patients and factors involved in the severity of the disease during these two years of COVID 19 pandemic, it seems that further studies are needed to clarify all the factors involved in influencing its severity.

**Aim:** Therefore, the aim of the present study was to evaluate the demographic, clinical and laboratory findings in intubated patients of COVID19 patients admitted to intensive care units of Ardabil Imam Khomeini Hospital.

**Methods and material:** This cross-sectional descriptive study was performed in Ardabil University of Medical Sciences from April 2020 in intubated COVID۱۹ patients admitted to the intensive care unit of Imam Khomeini Hospital. Demographic, clinical and laboratory findings of all patients included in the study were collected based on a questionnaire and after entering the data in SPSS v21 software, the results were analyzed using Fisher's exact test with a consindiration of P<0.05.

**Results:** In this study,۲۳۱ patients with intubated COVID 19 patients with a mean age of 57.77 ±14.69 and a frequency of 54% of males were included. The results showed that 57% of intubated patients recovered and 43% expired. The results revealed that the most comorbidities with intubated COVID 19 patients were hypertension (62.7%), diabetes (34.8%), cardiovascular disease (22.3%) and history of myocardial infarction (13.3%), respectively. Also, based on the outcome of the disease, the results showed that the mean age of the deceased was higher and statistically significant than that of the recovered. Analysis of laboratory results also revealed that the levels of leukocytes (P<0.0.1), neutrophils

(P<0.01), di dimers (P<0.001), AST (P<0.05), lactate in the deceased compared with those improved. Dehydrogenase (P<0.001), troponin (P<0.01), ferritin (P<0.001), HbA1C (P<0.01), urea (P<0.001), creatinine (P<0.05), and dimer (P<0.001) were more and statistically significant.

**Conclusion**: The results of the present study showed that comorbidities associated with disease in COVID 19 patients affect the severity of the disease and especially their intubation in the intensive care unit. On the other hand, changes in inflammatory, renal, and hepatic markers in intubated COVID 19 patients affect the outcome of the disease, which requires immediate attention and treatment.

**Keywords:** Covid19, Intensive care, Mortality, Comorbidity, Clinical symptoms, Laboratory