Examining the Supportive, Antibiotic, and Antiviral Treatment Regimens and Their Relationship with COVID-19 Disease in Chaharmahal and Bakhtiari Provinces in 2019-2020

Zahra Rafiee[1*], Abdollah Mohamadian[2], Fatemeh Fatahian[2],
Maryam Ghasemi Dehcheshme[1], Maryam Hashemi[1]

[1]Student Research Committee, Shahrekord University of Medical Sciences, Shahrekord, Iran
[2] Health Research Center, Shahrekord University of Medical Sciences, Shahrekord, Iran

*Corresponding Author:
Student Research Committee, Shahrekord University of Medical Sciences, Shahrekord, Iran

ABSTRACT

Introduction: Conducting epidemiological studies is one of the most critical factors in effectively controlling a disease, implementing intervention measures for treating patients and preventing fatalities. These studies examine the patterns of treatment regimens among patients and identify the factors influencing therapists' treatment choices. Additionally, they help establish the relationship between the type of treatment administered and the disease's outcome.

Methods and Materials: This study utilized data from the health portal of the Ministry of Health and the information systems of the treatment vice-chancellor for treatment concerning patients with COVID-19. For each suspected and confirmed case of the disease, individual examination forms for COVID-19 were completed. These forms included information such as demographics, clinical characteristics, history of associated or underlying conditions, epidemiological data, details about treatment regimens, laboratory results from diagnostic and confirmatory tests, and disease outcomes. Nurses and healthcare workers in the hospital recorded this information daily in the examination forms and the patient's medical records. SPSS26 and Stata 14 statistical software were used to analyze the study data.

Results: The results showed that 439 patients (38.64%) were classified with probable diagnosis, while 697 patients (61.35%) were classified with a definite diagnosis. This study found that 36% of all patients received antibiotic treatments, 45.3% received antiviral treatments, and 18.7% received supportive treatments. Among deceased individuals, 44.8% received antibiotic treatments, 37.3% received antiviral treatments, and 17.9% received supportive treatments. In patients with a definite diagnosis of the disease, a statistically significant relationship was observed between the type of treatment regimen and the disease outcome (recovery and mortality). Specifically, 52.5% of recovered patients and 40.2% of the deceased patients had received antiviral treatments. Additionally, 34.8% of recovered patients and 50.5% of those who died from the disease had received antibiotic treatments (p = 0.012).

Conclusion and Discussion: The findings of this study reveal the treatment regimens used for hospitalized patients with COVID-19 in Chaharmahal and Bakhtiari Province, as well as the determining and related factors. More importantly, it evaluates the relationship between the treatment regimens received and the outcomes of the disease. Moreover, the study indicates the proportion of patients need requiring mechanical ventilation, intensive care unit hospitalization, and specialized care.