Clinical Symptoms, Paraclinical Findings, and Final Outcome of Hospitalized Patients with Hypothyroidism and COVID-19

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ABSTRACT

Introduction: Hypothyroidism causes disorders and clinical symptoms in all body systems, including the respiratory system. COVID-19 is a new disease that can lead to severe pneumonia and numerous fatalities. Investigating the impact of underlying health conditions on the outcomes of this disease will be crucial for improving its management. This study investigated the clinical symptoms, physical and paraclinical findings, and outcomes of hypothyroid patients with COVID-19 admitted to Beheshti Hospital in Kashan between 2019 and 2021.

Methods and Material: This descriptive study was conducted on 100 patients with COVID-19 who have underlying hypothyroidism and were admitted to Shahid Beheshti Hospital in Kashan between 1998 and 1999. A questionnaire containing demographic information, records, clinical symptoms, laboratory findings, and the outcome of the patients was completed by reviewing the patients' files, and the information was entered into the SPSS software v. 16. In the end, the results were analyzed statistically.

Results: Among 100 patients studied, 19% were men and 81% were women. The average age of the studied patients was 54.93 ± 16.71. The most common symptoms were dry cough (56%), shortness of breath (54%), fever (53%), and weakness and malaise (52%). The most common underlying diseases were blood pressure (41%), diabetes (22%), and ischemic heart disease (15%). Also, 10% of patients died. There was a statistically significant relationship ($p = 0.05$) between age, history of close contact with a COVID-19 patient, the presence of underlying ischemic heart diseases, kidney failure, cancer, oxygen saturation (SPO_2) levels at the time of admission, ESR, CRP, BUN, CT scan findings of lung and pleural effusion, and the severity score of lung involvement in the CT scan.

Conclusion and Discussion: The frequency of hypothyroidism was higher in women with COVID-19. Additionally, mortality rates were elevated among older women, and lower SPO_2 at the time of admission, the presence of certain underlying conditions, and higher CT scores were associated with increased mortality. Considering the relatively high mortality rate among these patients, special care is essential to prevent the progression of COVID-19.

Keywords: COVID-19, Hypothyroidism, Signs and symptoms

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