

Investigation of clinical and laboratory findings in patients with COVID-19 by gender in Imam Khomeini Hospital, Ardabil from April to September 2019

Abstract

Background: Some evidence has shown that there is a relationship between the gender of patients with Covid-19 and the mortality rate as well as the critical condition of the patient. The current study aimed to evaluate clinical and laboratory findings in patients with covid-19 based on gender differences.

Aim: To determine clinical and laboratory findings in patients with COVID-19 by gender in Imam Khomeini Hospital, Ardabil, from April to September 2019.

Materials and Methods: This study was a retrospective cross-sectional study that was conducted from the beginning of April to the end of September 2019 in hospitalized patients diagnosed with Covid-19 at Imam Khomeini Hospital (RA) in Ardabil. For all subjects, a checklist including demographic characteristics, clinical findings and laboratory findings was completed. All information related to the people included in the study, such as demographic information (including age, sex, medical history, etc.), clinical information of patients (hospitalization department, duration of hospitalization, recovery or death, need for ventilator treatment, need for oxygen therapy, etc.), and the laboratory findings of the patients (including CRP, BUN, Cr, Fertein, WBC, Hb, hematocrit, etc.) were extracted from the patient records and recorded in a questionnaire designed for each patient.

Results: 812 patients with covid-19 with an average age of 58.8 ± 17.2 years were included in this study. In total, 455 patients (0.56%) were male and 357 patients (0.44%) were female. In general, 176 patients (21.7%) died. The frequency of death among male patients was significantly higher than female patients ($P=0.008$). The age of deceased patients in both genders was significantly higher than that of surviving patients ($P < 0.001$). In male patients, the history of cardiovascular disease ($P=0.001$), CVA ($P<0.001$) and cancer ($P=0.002$) was

significantly higher in those who died. In female patients, history of diabetes ($P = 0.033$), cardiovascular ($P = 0.001$), heart failure ($P = 0.001$), and kidney ($P = 0.001$) in those who died were significantly more Was.

Conclusion: In general, the results of the study showed that most of the hospitalized patients with Covid-19 were male and over 55 years old. One fifth of hospitalized patients had died. Mortality among male patients was higher than female patients and among elderly patients was higher than among younger patients. In both sexes, the history of underlying diseases among the deceased was significantly higher than the surviving ones. In both sexes, the level of neutrophils and inflammatory factors was higher among deceased people, and on the other hand, among male patients, the level of eosinophil and lymphocyte was lower, and among female patients, the level of lymphocyte was lower among the deceased.

Keywords: covid-19, gender, outcome.