Evaluation of Clinical and laboratory and CT scan findings in deceased patients with COVID-19 admitted in Ardabil Imam Khomeini Hospital in 2020

Abstract

Background: Lung involvement is one of the main concerns in patients with Covid-19. CT scan has been widely used to diagnose, evaluate lung involvement, and choose the type of treatment in these patients, but there is still no clear and accurate picture about the radiological findings in these patients.

Aim: Evaluation of clinical, hematological and CT scan findings in deceased patients with covid-19 admitted to Imam Khomeini Hospital in Ardabil from the March 2020 to the March 2021

Materials and methods : This retrospective cross-sectional study was conducted from the beginning of March 2020 to the beginning of March 2021 in all patients with Covid-19 who died in Imam Khomeini Hospital, Ardabil. For all subjects, a checklist including demographic characteristics and radiological findings was completed. The criteria for inclusion in the study were all patients with Covid-19 whose real-time PCR test was positive in connection with the disease of Covid-19 or people for whom the diagnosis of Covid-19 was confirmed according to the national guidelines based on the CT scan findings. Questionnaire information was collected and after entering into SPSSV21 software, the results were analyzed using Fisher's exact test and reported with the criterion of $p<0.05$.

Results: A total of 364 patients with an average age of 68.03 ± 14.22 years were included in the study, including 214 men (58.8%) and 150 women (41.2%). The most common radiological findings were related to consolidation (74%), septal thickening (67%), ground glass (62.4%) and crazy paving (49.5%). The age of the patients had a significant relationship with the following findings: The age of the patients had a significant relationship with the nature of involvement in the upper and middle parts of the right lung and the middle and lower parts of the left lung.

The age of the patients had a significant relationship with the underlying diseases of blood pressure, diabetes, history of cardiovascular disease, and rheumatology disease.

Gender of patients had a significant relationship with the following: In the hematological findings, there was a significant relationship between the ferritin variable and the gender of the patients. The gender of the patients had a significant relationship with the underlying disease of diabetes.

Conclusion: The most common radiological finding in deceased patients with covid-19 was septal thickening and consolidation. Most patients had bilateral lung involvement. Patients older than 60 years who died had more abnormal findings, more underlying diseases, and worse nature of involvement on CT scan images.

Key words: covid19,clinical findings,CT-scan, hematological finding