

Evaluation of radiological findings in elderly and young people with COVID-19 in Ardabil Imam Khomeini hospital in March to September 2020

Abstract

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

Aim: Evaluation of radiological findings in elderly and young people with COVID-19 in Ardabil Imam Khomeini hospital in March to September 2020

Materials and methods: This study was a retrospective cross-sectional study that was performed from April to September 2020 in all patients with Covid 19 admitted to Imam Khomeini Hospital in Ardabil. For all subjects, a checklist containing demographic characteristics and radiological findings was completed.

Results: A total of 300 patients with a mean age of 60.4 ± 17.6 years were included in the study, Which consisted of 163 men (54.3%) and 137 women (45.7%). The most common radiological findings were ground.glass (85.3%), Diffuse (83.7%), and Multifocal (81%). Patients' age was significantly associated with the following findings: vascular.enlargement, linear.opacity, pleural.thickening, pleural.effusion, and pericardial.effusion. The age of patients was significantly associated with the extent of involvement of the right ($P = 0.026$) and left ($P = 0.030$) lower lung. The death rate was 15.7% (47 cases) and the mean age of the deceased was significantly higher than the survivors ($P = 0.016$). Patient survival was significantly associated with the following radiological findings: ground.glass, vascular.enlargement, bilateral.abnormalitie, lower.lobe.invol, posterior.predilection, Consolidation, crazy.paving, air.bronchogram, pleural.thickening, bronchiectasis, Diffuse, Multifocal, and middle.or.upper.lobe. Patient survival was significantly associated with the extent and nature of involvement in both the right and left lungs.

Conclusion: The most common radiological findings in patients with Covid-19 was ground.glass. Most patients had bilateral and inferior lung involvement. The mean age of patients who died was significantly higher than that of patients who

recovered. Patients over 60 years of age and patients who died had higher abnormal findings, greater involvement, and worse nature involvement on CT scans.

Keywords: Covid 19, Radiological findings, Elderly.