

Evaluation of demographic, clinical and laboratory findings in patients with myocardial infarction before and after coronavirus outbreak in Imam Khomeini Hospital in Ardabil during 2019 and 2020

Abstract

Background: The emergence of the novel coronavirus disease in 2019 (Covid-19) significantly affected the health system around the world, causing changes in people's health behaviors and a sharp decrease in medical resources. The management of heart attack patients as one of the medical emergencies was not excluded from this rule and was affected by this epidemic.

Aim: To evaluate demographic, clinical and laboratory findings in patients with myocardial infarction before and after coronavirus outbreak in Imam Khomeini Hospital in Ardabil during 2019 and 2020.

Materials and methods: This study was a retrospective cross-sectional study that examined patients hospitalized due to heart infarction during the outbreak of the coronavirus and one year before that at Imam Khomeini Hospital in Ardabil. For all these patients, demographic information (age, gender, medical history), clinical information (hospitalization ward, duration of hospitalization, recovery or death), and laboratory findings (white blood cells, neutrophils, lymphocytes, ratio of neutrophils to lymphocytes, monocytes, hemoglobin, hematocrit, CK-MB, and troponin), and angiography findings were extracted from the patient files and recorded in the checklist.

Results: 500 patients were included in this study. 336 patients (67.2%) were related to 2019 and 164 patients (32.8%) were related to 2020. The average age of the patients was 62.9 ± 13.2 years and 340 of them (68.0%) were men and 160 (32.0%) were women. A total of 64 patients (12.8%) died. Patients of two periods had significant differences in terms of neutrophil ($P=0.047$) and lymphocytes ($P=0.032$), but there were no differences in other laboratory findings. Patients of two periods had no significant differences in terms of involvement in three main arteries (RCA, LCX, or LAD) ($P=0.086$), involvement in LCX branches ($P=0.393$), EF value ($P=0.135$), and MI type ($P=0.118$), but there was a significant difference in terms of involvement of LAD ($P=0.001$) and RCA

branches (P=0.006). There was no significant difference between the patients of the two periods in terms of gender (P=0.574), average age (P=0.197), length of hospitalization (P=0.649), hospitalization ward (P=0.779), and outcome (P=0.157).

Conclusion: In general, the results of the current study revealed that the clinical and laboratory findings of patients during the corona pandemic phase were not significantly different from the previous year in relation to patients with acute myocardial infarction. Although some of the relevant information of patients with acute myocardial infarction were investigated, it seems that more detailed investigations are necessary for general conclusions.

Keywords: myocardial infarction, covid 19.