Assessing the relationship between vaccination against covid-19 disease and in-hospital mortality of diabetic patients with COVID-19, admitted in Kowsar hospital, Semnan, 2020-2021

Atosa Najmoddin[1 2], Fereshteh Heydari*[3]

1 Department of Internal Medicine, Semnan University of Medical Sciences, Semnan ,Iran

2 Clinical Research Development Unit, Kowsar Educational, Research and Therapeutic Hospital, Semnan University of Medical Sciences, Semnan, Iran

3 Fereshteh Heydari, Department of Internal Medicine, Semnan University of Medical Sciences, Semnan ,Iran

Abstract

Background and Aim: The emerging pandemic disease, Covid-19 is an epidemic with high mortality, and vaccination is the only way to deal with. Comorbidities, especially diabetes and hypertension, play an important role in aggravating the disease and its complications. Vaccination in this group of patients has been associated with complications and has played a role to refuse vaccination by these patients. It is necessary to identify and management the cases of adverse reactions to the vaccine, to choose the preferred vaccine, and in the next step, to prevent the occurrence of complications and provide optimal immunization. In this study, the relationship between vaccination against COVID-19 and its consequences in diabetic patients was investigated.

Methods: This descriptive-analytical, cross-sectional study was conducted by *full-count sampling method* and diabetic patients vaccinated in 2020 and 2021 who were infected with COVID-19 and were admitted to Kawsar Hospital affiliated to Semnan University of Medical Sciences were enrolled. Their medical information records assessed and demographic information, initial symptoms during hospitalization, underlying diseases, vaccination information, complications, laboratory findings, the need to ICU, duration of hospitalization, type of treatment, and the final outcome (death or recovery and discharge), were recorded in the checklist. The data were analyzed at a significance level of less than 0.05.

Results: There was no significant difference between the two groups in terms of gender and age. Multiple symptoms were more frequent in non-vaccinated patients than in vaccinated patients (P=0.003). The mean length of stay in hospital was 6.71±6.85 days (vaccinated 5.97±5.14 days and non-vaccinated 7.39±8.05 days) (P=0.033). The cases of hospitalization in the intensive care unit in vaccinated patients were less than non-vaccinated patients (P<0.001). Cases of severe form of the disease in vaccinated patients were significantly lower than non-vaccinated patients (P<0.001). Cases requiring mechanical ventilation in vaccinated group patients were significantly (P<0.001) less than non-vaccinated patients.