Medication adherence and COVID-19 vaccination status: retrospective study

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Introduction: Coronavirus disease (COVID-19) pandemic is a public health emergency caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Vaccines are the most effective measure for both preventing COVID-19 infections and its complications. Even before the COVID-19, vaccine hesitancy was becoming prevalent in European Union (EU) and Croatia. Vaccine hesitancy is correlated to lack of trust in science, lower levels of education and lower health literacy[1]. Lower medication adherence is a problem in treating chronic disease, especially cardiovascular disease. Identifying patients prone to lower drug adherence could help target interventions for better adherence[2]. Seeing as data on SARS-CoV-2 vaccination is readily available, vaccination status could help identify these patients. In this study, we wanted to see if vaccination status correlated with drug adherence in patients with cardiovascular disease.

Patients and Methods: This was a retrospective observational study conducted at Dubrava University Hospital, Zagreb. We recruited patients hospitalized for acute coronary syndrome (ACS) from January 2017 to January 2020. We collected data on sociodemographic data, type of ACS, prescribed drugs, body mass index (BMI) and vaccination status. Adherence score was calculated using Morisky Medication Adherence score. Data was collected either during regular visits or by telephone contact.

Results: We collected data for 1,441 participants in total. Median age of the participants was 64y (interquartile range, IQR 56-72), with 409 females (29.6%) and 974 (70.4%) males. Majority of participants had at least high school level of education and were retired. Median BMI of the participants was 28.87 (IQR 25.73-31.20). We grouped the participants according to their SARS-CoV-2 vaccination status. The groups did not differ by age, sex, marital status, BMI, or smoking status. The vaccinated group had a higher number of participants with higher level of education and active employment. Medication adherence score was higher in the vaccinated group (odds ratio, OR=1.64 (1.55-1.74), p<0.001).

Conclusion: Vaccinated participants had a higher medication adherence score. Vaccination status could be used to identify ACS patients that might benefit from an early intervention to improve drug adherence.

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