LONG TERM OUTCOMES OF MYOCARDITIS AND PERICARDITIS IN PATIENTS WITH COVID-19 INFECTION

Akhmedova G. A., Urokov F.M.

Samarkand State Medical University

Samarkand, Uzbekistan

Introduction. Myocarditis and pericarditis are only two of the many cardiovascular complications that can be caused by COVID-19. It is unknown how often these complications are or what kind of influence they have on patients. Among individuals who had COVID-19, we looked at the incidence of new-onset myocarditis and pericarditis as well as associated adverse cardiovascular events.

Materials and methods. A retrospective investigation employing medical data obtained from a regional COVID-19 centers was carried out in the form of a cohort study. Participants were considered for inclusion in the study if they had a diagnosis of COVID-19 as well as new-onset pericarditis or myocarditis. Patients who had COVID-19 and myocarditis or pericarditis were compared to patients who had COVID-19 but did not have myocarditis or pericarditis using a propensity score that was 1:1. These patients were matched for age, sex, race, and comorbidities. The outcomes that were being compared between individuals with and without myocarditis/pericarditis were 6-month death from any cause, hospitalization, cardiac arrest, incident heart failure, incident atrial fibrillation, and acute myocardial infarction.

Results. 410 patients out of 4,136 infected with COVID-19 experienced new-onset myocarditis, whereas 301 patients out of 3,325 developed new-onset pericarditis. Patients diagnosed with myocarditis had a six-month death rate of 3.9% (n = 16), whereas matched controls had a mortality rate of 2.9% (n = 12) ($p<0.0001$); the odds ratio was 1.29 (95% confidence interval (CI): 1.05–2.36). Over the first six months after diagnosis, the overall death rate for pericarditis patients was 15.5% (n = 46) compared to 6.7% (n = 20 in the control group; $p<0.0001$); the odds ratio was 1.87 (95% confidence interval: 1.12–2.93). Patients diagnosed with myocarditis and pericarditis who received critical care had a dramatically increased risk of mortality as a result of their condition. Participants diagnosed with pericarditis were associated with a greater number of new-onset cardiovascular sequelae compared to those diagnosed with myocarditis. This conclusion was consistent when looking at data with pneumonia patients that was collected before COVID-19.

Conclusions. Individuals diagnosed with COVID-19 who exhibit symptoms of myocarditis or pericarditis are linked to an elevated risk of significant adverse events and new-onset cardiovascular sequelae.