COVID-19 pandemic and admission rates for and management of acute coronary syndromes in Israel

E. Asher[1], A. Fardman[2], D. Zahger[3], K. Orvin[4], M. Mohsen[5], O. Tsafrir[6], R. Rubinshtein[7], J. Jamal[8], R. Efraim[9], N. Kofman[10], M. Halabi[11], Y. Shacham[12], L. Henri Fortis[13], R. Beigel[2], S. Matetzky[2]

[1]Shaare Zedek Medical Center, Jerusalem, Israel; [2]Sheba Medical Center, Heart Institute, Ramat Gan, Israel; [3]Soroka University Medical Center, Beer Sheva, Israel; [4]Rabin Medical Center, Petah Tikva, Israel; [5]Hillel Yaffe Medical Center, Hadera, Israel; [6]Western Galile Hospital, Nahariya, Israel; [7]The Edith Wolfson Medical Center, Holon, Israel; [8]Barzilai Medical Center, Ashkelon, Israel; [9]Rambam Health Care Campus, Haifa, Israel; [10]Meir Medical Center, Kfar Saba, Israel; [11]Ziv Medical Center, Safed, Israel; [12]Tel Aviv Sourasky Medical Center, Tel Aviv, Israel; [13]Assuta Medical Center, Tel Aviv, Israel

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Background: Since the COVID-19 pandemic outbreak several countries have reported a decrease in the number of patients admitted with non-ST elevation myocardial infarction (NSTEMI).

Purpose: We aimed to evaluate admission trend and outcomes of patients with NSTEMI in the COVID-19 era in a nationwide survey.

Methods: A prospective, multicenter, observational, nationwide study involving 13 medical centers across Israel. All NSTEMI patients admitted to intensive cardiac care units (ICCUs) over an 8-week period during the COVID-19 outbreak were compare them with NSTEMI patients admitted 2 years earlier (control period) during the Acute Coronary Syndrome Israeli Survey (ACSIS) 2018.

Results: There were 624 (43%) NSTEMI patients, of them 349 (56%) hospitalized during the COVID-19 era and 275 (44%) during the control period, representing a 27% increase in NSTEMI admission rate during the COVID-19 era. Approximately 76% were male, median age was 67 years (IQR 58–76). There were no differences in baseline characteristics between the two study periods. During the COVID-19 era, more patients arrived at the hospital via an emergency medical system (EMS) compared with the control period (p for trend = 0.005)

Time from symptom onset to hospital admission was longer in the COVID-19 era [687.00 (IQR147–2805) vs. 178.00 (IQR 102- 407), respectively, p-value <0.001]. Nevertheless, time from hospital admission to reperfusion was similar in both groups. Rate of percutaneous coronary intervention was higher in the COVID-19 era group (91.3% vs. 59.7%, respectively, $p<0.001$). In-hospital mortality rate was similar in both groups (2.3% vs. 4.7%, respectively, p=0.149) as was the 30-day mortality rate (3.7% vs. 5.1%, respectively, p=0.238).

Conclusions: In contrast to previous reports, in Israel, admission rate of NSTEMI was increased during the COVID-19 era. With longer time from symptoms to admission, but with the same time from hospital admission to reperfusion therapy and with similar in-hospital and 30-day mortality rates.