18.2 - Epidemiology, Prognosis, Outcome

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Acute coronary syndromes hospitalizations and in-hospital outcomes during and after the lockdown of corona virus disease 19 (COVID-19) pandemic outbreak

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Background: Multiple studies documented an important reduction of acute coronary syndromes (ACS) admissions during the Coronavirus Disease 19 (COVID-19) pandemic. There are few studies regarding the ACS admissions and outcomes during the ongoing pandemic after the initial lockdown.

Purpose: We aimed to study the ACS admissions and in-hospital outcomes during and after the COVID-19 lockdown period.

Methods: A retrograde single-center study was conducted. The data for all admissions were collected from March 9th, (first COVID-19 case) until April 30th, the corresponding period of 2020 total lockdown, for three consecutive years from 2019 to 2021. The control period was considered the year 2019 and the study periods were in 2020 (lockdown) and 2021 (ongoing pandemic). ACS admissions were classified as ST-elevation myocardial infarction (STEMI), non-STEMI (NSTEMI), and unstable angina (UA). Incidence rate ratio (IRR [95%CI]) was used to compare all-ACS and subgroups admissions, and risk ratio (RR [95%CI]) to compare the mortality between each study period with the control one.

Results: Were included 550 ACS patients (pts) during 2019, 321 pts during 2020, and 473 pts during 2021 period. The overall-ACS admissions IRR was significantly lower during 2020 lockdown (0.58 [0.44-0.76]), and not significant during 2021 ongoing pandemic (0.86 [0.62-1.18]). During 2020 lockdown, significant reduction for STEMI and UA, the IRR respectively (0.72 [0.56-0.94]) and (0.42 [0.22-0.76]), and not significant in during 2021 respectively (0.87 [0.63-1.21]) and (0.86 [0.51-1.46]) were observed. The reduction in NSTEMI admissions was not significant in both periods.

The overall mortality was, importantly increased during the lockdown period (7.45 vs. 3.4 %), RR=2.16 (1.2-3.89). Meanwhile the 2021 mortality was similar (4.2 vs. 3.4%), RR=1.22 (0.66-2.26).

Conclusions: After the initial reduction of admissions in all-ACS, STEMI and UA during the 2020 lockdown period and the increase of all-ACS mortality, the number of admissions and the mortality returned to a similar range during 2021 despite the ongoing COVID-19 pandemic.