

C88 EFFECT OF SARS-COV2 INFECTION ON ACUTE CORONARY SYNDROME: A RETROSPECTIVE OBSERVATIONAL STUDY

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Introduction: In Northern Italy, from October 2020 to April 2021, the second wave of COVID-19 pandemic recorded the highest incidence of infections ever. In this semester, the Lombardy region alone counted 43,318 positive cases and 16,710 deaths. It is well known how COVID-19 leads to a negative prognosis in acute coronary syndrome (ACS). This study aims to analyze the dramatic consequences of SARS-CoV2 infection on patients with concomitant ACS during the worst pandemic period ever recorded in Northern Italy.

Materials and Methods: The study enrolled 255 consecutive patients who have been hospitalized for ACS (STEMI or NSTEMI) from October 2020 to April 2021, both from the hub and spoke hospitals. Two subgroups are compared: the first is composed of patients who have tested positive for at least one molecular SARS-CoV2 swab (at admission or during hospitalization), the other group is composed of patients who have been tested negative to SARS-CoV2 swab. Major clinical data, risk factors (RF), comorbidities, laboratory findings, reperfusion times, drug therapy, complications and in-hospital mortality were systematically collected.

Results: Patients main characteristics are shown in [Table 1](#). No differences have been observed in clinical history, RF and comorbidities in the subgroups. At admission, the incidence of acute pulmonary edema (APE) and respiratory symptoms was significantly higher in the SARS-CoV2 group, respectively 14% ($p=0.005$) and 18% ($p=0.017$). No differences in the "onset to door" and "door to needle" delays have been recorded. The incidence of the composite in-hospital complications is markedly increased in SARS-CoV2 group. Compared to negative patients, a higher mortality rates (18% Vs. 4%; $p=0.017$), higher incidences of acute renal failure (ARF) (18% Vs. 5%; $p=0.037$), cardiogenic shock (14% Vs. 3%; $p=0.033$) and a wider prescription of inotropes (23% Vs. 10%; $p=0.009$) in the SARS-CoV2 cohort.

Conclusion: The study confirms the negative prognostic impact of COVID-19 infection on ACS, recording a significantly higher rate of all major complications, both related to ischemia with multiorgan failure and interstitial pneumonia. Higher incidence of APE, cardiogenic shock and ARF has been observed in SARS-CoV2 positive subgroup, which is corroborated by a quadrupled risk of in-hospital mortality in the COVID-19 cohort.

DATI ANAMNESTICI n (%)	COVID + n (22)	COVID - n (233)	P VALUE
ANAGRAFICI			
SESSO FEMMINILE	2 (9%)	46(20%)	ns
ETA' > 75 ANNI	4 (18%)	51 (22%)	ns
ETA' mediana (IQR)	65 (57-72)	64 (57-73)	ns
FATTORI DI RISCHIO CARDIACI			
IPA	16 (73%)	155 (67%)	ns
DISLIPIDEMIA	12 (55%)	146 (63%)	ns
EX-FUMATORI	7 (32%)	57 (24%)	ns
FUMATORI	8 (36%)	94 (40%)	ns
DIABETE MELLITO	8 (37%)	63 (26%)	ns
PRECEDENTI CARDIACI			
PREGRESSO IMA	4 (18%)	42 (18%)	ns
PREGRESSA PCI > 6 MESI	2 (9%)	36 (15%)	ns
PREGRESSO BPAC	1 (5%)	6 (3%)	ns
PATOLOGIE PREGRESSE			
PREGRESSO STROKE ISCHEMICO	2 (9%)	8 (3%)	ns
IRC	2 (9%)	10 (4%)	ns
eGFR (DS)	75 (±26)	74 (±21)	ns
DIAGNOSI			
NSTEMI	8 (36%)	109 (47%)	ns
STEMI	14 (64%)	124 (53%)	ns

