

**Different COVID19 pandemic phases & STEMI: experience from an Italian hub centre**G. Tumminello<sup>1</sup>, L. Barbieri<sup>1</sup>, F. Toriello<sup>2</sup>, S. Lucreziotti<sup>1</sup>, M. Carla<sup>1</sup>, B. Conconi<sup>1</sup>, D. Salerno Uriarte<sup>1</sup>, A. Mafricci<sup>1</sup>, S. Carugo<sup>2</sup><sup>1</sup>Saint Paul Hospital, Milano, Italy; <sup>2</sup>IRCCS Fondazione Ca Granda Ospedale Maggiore Policlinico, Milan, Italy**Funding Acknowledgement:** Type of funding sources: None.

**Introduction and methods:** During Coronavirus disease 2019 (COVID-19) pandemic a reduction in ST-elevation acute myocardial infarction with an increase in in-hospital mortality has been observed. In our region the pandemic temporal trend was sinusoidal with peaks and valleys. A first outbreak (phase-peak 1 “P-P1”) was in March 2020 (248.12 cases for 100,000 inhabitants), a reduction (phase-valley 1 “P-V1”) in May 2020 (16.68 cases for 100,000 inhabitants) and a second outbreak (phase-peak 2 “P-P2”) in November 2020 (540.17 cases for 100,000 inhabitants; data from Italian Health Ministry). Our hospital was reorganized as one of the 13 Macro-Hubs identified in Lombardy for the treatment of STEMI. Here we describe our experience in the treatment of STEMI patients in the three different phases of COVID-19 pandemic.

**Results:** In the three different phases the groups were superimposable for mean characteristics, but they differ for COVID-19 infection incidence (ta-

ble). At multivariate analysis for the entire population COVID-19 infection (OR 45.8 [95% CI] 1.39–1511.79;  $p=0.03$ ) was the only independent predictor of in-hospital mortality. Focusing on COVID-19 patients (figure) they experienced a 5-time increased incidence of in-hospital mortality (COVID-19pos vs COVID-19neg, 50% vs 11.1%;  $p=0.02$ ). Moreover, the presence of COVID-19 infection induced an 8 times increased risk of death (OR 8; [95% CI] 1.85–34.60;  $p=0.005$ ) determined by a higher incidence respiratory complications (COVID-19pos vs COVID-19neg, 33.3% vs 8.9%;  $p=0.03$ ) with a similar incidence of cardiac death (COVID-19pos vs COVID-19neg, 16.7% vs 11.17%;  $p=0.60$ ).

**Conclusions:** In conclusion our data suggest the crucial necessity of an early and precise diagnosis of COVID-19 infection in STEMI to establish a correct management of this very high risk patients.

