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BACKGROUND Although in-hospital mortality for COVID-confirmed (COVID+) patients presenting with ST-elevated myocardial infarction (STEMI) is high, its predisposing risk factors—and, in particular, the cumulative risk rendered by their combination—is unknown. We sought to develop a risk score of in-hospital mortality in COVID+ patients presenting with STEMI.

METHODS Baseline clinical and procedural characteristics of COVID+ patients presenting with STEMI in the North American COVID-19 Myocardial Infarction (NACMI) registry were evaluated as univariable predictors of in-hospital mortality. A backwards, stepwise, logistic regression was used to create a multivariable model to identify independent predictors of in-hospital mortality. A backwards, stepwise, logistic regression was used to create a multivariable model to identify independent predictors of in-hospital mortality. A backwards, stepwise, logistic regression was used to create a multivariable model to identify independent predictors of in-hospital mortality. A backwards, stepwise, logistic regression was used to create a multivariable model to identify independent predictors of in-hospital mortality. A backwards, stepwise, logistic regression was used to create a multivariable model to identify independent predictors of in-hospital mortality.

RESULTS The overall occurrence of in-hospital mortality in 370 COVID-19+ cases presenting with STEMI was 28%. In-hospital mortality increased exponentially with increasing risk score (Cochran Armitage chi-square, $P < 0.001$), and the model demonstrated good discriminative power ($C$-statistic $= 0.85$). The increasing risk score was strongly associated with in-hospital mortality (range $< 1\%$ to $65\%$ for a low- and very high-risk score, respectively; see Figure 1).

CONCLUSION The risk of in-hospital mortality in COVID+ patients presenting with STEMI can be simply assessed using readily available information.

CATEGORIES CORONARY: Acute Myocardial Infarction