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myocardial infarction (MI), heart failure, atrial fibrillation, prior stroke, and chronic obstructive pulmonary disease (all, $P < 0.001$). Both CKD and ESRD were associated with longer hospital stay (5.1 vs 3.8 days and 7.2 vs 3.8 days; $P < 0.001$). Patients with ESRD had a higher incidence of vascular complications (4.9% vs 3.9%; $P = 0.05$), procedural MI (6.0% vs 3.4%; $P = 0.04$), and cardiac arrest (0.8% vs 0.2%; $P = 0.01$). In-hospital mortality, conversion to open surgery, and the use of mechanical circulatory support did not differ between groups. **Table 1** presents in-hospital outcomes of patients undergoing TAVR in the United States from 2016 to 2018.

	No CKD (n = 87,560)	CKD (n = 43,565)	ESRD (n = 4,910)	CKD Adjusted OR (95% CI) <i>P</i> = 0.090	ESRD Adjusted OR (95% CI) <i>P</i> = 0.040
In-hospital mortality	1,165 (1.3%)	775 (1.8%)	100 (2.0%)	0.8 (0.6-1.0) <i>P</i> = 0.090	1.0 (0.6-1.7) <i>P</i> = 0.940
Impella	205 (0.2)	165 (0.4)	10 (0.2)	1.1 (0.6-2.1) <i>P</i> = 0.700	0.4 (0.1-1.8) <i>P</i> = 0.240
Intra-aortic balloon	355 (0.4)	200 (0.5)	65 (1.3)	0.7 (0.4-1.1) <i>P</i> = 0.140	1.3 (0.7-2.8) <i>P</i> = 0.410
Vascular access complications	3,240 (3.7)	1,830 (4.2)	240 (4.9)	1.1 (1.0-1.3) <i>P</i> = 0.060	1.3 (1.0-1.8) <i>P</i> = 0.050
Procedural acute MI	2,800 (3.2)	1,495 (3.4)	295 (6.0)	0.8 (0.7-1.0) <i>P</i> = 0.080	1.4 (1.0-1.9) <i>P</i> = 0.040
Cardiogenic shock	1,205 (1.4)	665 (1.5)	135 (2.7)	0.9 (0.6-1.1) <i>P</i> = 0.260	1.5 (0.9-2.4) <i>P</i> = 0.090
Cardiac arrest	195 (0.2)	130 (0.3)	40 (0.8)	1.1 (0.6-2.2) <i>P</i> = 0.780	3.3 (1.3-8.4) <i>P</i> = 0.010
Conversion to open surgery	400 (0.5)	140 (0.3)	30 (0.6)	0.8 (0.5-1.5) <i>P</i> = 0.520	2.1 (0.8-5.4) <i>P</i> = 0.140

CONCLUSION Patients with renal dysfunction undergoing TAVR are at higher risk for cardiovascular complications, although this does not seem to result in increased in-hospital mortality or more frequent conversion to open surgery.

CATEGORIES STRUCTURAL: Valvular Disease: Aortic

during admission (HR: 3.02; 95% CI: 2.36-3.88; $P \leq 0.001$) were significantly associated with increased 2-year mortality. History of CCB and BB use was not associated with either an increase or decrease in mortality.

CONCLUSION Cardiovascular diseases are associated with worse 2-year mortality. Chronic use of CCB and BB was not associated with differences in 2-year outcomes of COVID-19 and therefore likely safe.

CATEGORIES CORONARY: Pharmacology/Pharmacotherapy

TCT-549

Impact of COVID-19 Pandemic on TAVR Activity: A Worldwide Registry



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Impact of Cardiovascular Diseases, Calcium-Channel Blockers, and Beta-Blockers on Two-Year Mortality of Patients With COVID-19: A Single-Center Retrospective Analysis



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BACKGROUND Cardiovascular diseases and directed therapies are hypothesized to be associated with worse outcomes in patients with COVID-19. We investigated the effect of cardiovascular diseases and chronic treatment with calcium-channel blockers (CCB) and beta-blockers (BB) on 2-year mortality of COVID-19 patients.

METHODS We retrospectively analyzed the data of all consecutive patients admitted to our hospital system and diagnosed with SARS-CoV-2 through polymerase chain reaction between March 1, 2020, and April 30, 2020. Patients were followed up until May 1, 2022. The chi-square test was used to compare categorical variables, and the Mann-Whitney *U* test was used for continuous variables. Cox proportional hazards modeling was applied to all-cause 2-year mortality. Variables significant in univariate analysis ($P < 0.05$) were selected for the multivariate models.

RESULTS A total of 1,052 patients were included. The median age was 67 years (IQR: 58-77). At 2 years, 682 (64.8%) survived, and 370 (35.2%) expired. History of hyperlipidemia (HR: 1.34; 95% CI: 1.1-1.65; $P = 0.17$), history of heart failure (HR: 1.54; 95% CI 1.25-1.9; $P \leq 0.001$), history of hypertension (HR: 1.5; 95% CI: 1.08-2.1; $P \leq 0.017$), and MI

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BACKGROUND The COVID-19 pandemic had a considerable impact on the provision of structural heart intervention worldwide. Our objectives were: 1) to assess the impact of the COVID-19 pandemic on transcatheter aortic valve replacement (TAVR) activity globally; and 2) to determine the differences in the impact according to geographic region and the demographic, development, and economic status of diverse international health care systems.

METHODS We developed a multinational registry of global TAVR activity and invited individual TAVR sites to submit TAVR implant data

before and during the COVID-19 pandemic. Specifically, the number of TAVR procedures performed monthly from January 2019 to December 2021 was collected. The adaptive measures to maintain TAVR activity by each site were recorded, as was a variety of indices relating to type of health care system and national economic indices. The primary subject of interest was the impact on TAVR activity during each of the pandemic waves (2020 and 2021) compared with the same period pre-COVID-19 (2019).

RESULTS Data were received from 130 centers from 61 countries, with 14 subcontinents and 5 continents participating in the study. Overall, TAVR activity increased by 16.7% (2,337 procedures) between 2018 and 2019 (ie, before the pandemic), but between 2019 and 2020 (ie, first year of the pandemic), there was no significant growth (-0.1%; -10 procedures). In contrast, activity again increased by 18.9% (3,085 procedures) between 2020 and 2021 (ie, second year of the pandemic). During the first pandemic wave, there was a reduction of 18.9% (945 procedures) in TAVR activity among participating sites, while during the second and third waves, there was an increase of 6.7% (489 procedures) and 15.9% (1,042 procedures), respectively. Further analysis and results of this study are ongoing and will be available at the time of the congress.

CONCLUSION The COVID-19 pandemic initially led to a reduction in the number of patients undergoing TAVR worldwide, although health care systems subsequently adapted, and the number of TAVR recipients continued to grow in subsequent COVID-19 pandemic waves.

CATEGORIES STRUCTURAL: Valvular Disease: Aortic

TCT-550

In-Hospital vs Out-of-Hospital STEMI Mortality in COVID-19-Negative vs COVID-19-Positive Patients in a Large Hospital System in South Florida



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BACKGROUND It is known that patients experiencing in-hospital ST-segment elevation myocardial infarctions (STEMIs) have higher mortality compared with out-of-hospital STEMIs. However, this has not been studied extensively in COVID-19-positive patients with STEMI. The purpose of this study was to compare the mortality of in-hospital vs out-of-hospital STEMI in patients with and without COVID-19 infection.

METHODS We conducted a single-center, retrospective observational study of all patients admitted to Memorial Healthcare System facility hospitals from April 1, 2020, to August 31, 2021, who had a STEMI. The primary outcome was in-hospital mortality. Subgroup analyses of in-hospital and out-of-hospital STEMI patients were made.

RESULTS A total of 302 patients were included, with 20 being COVID-19 positive. The mortality of in-hospital STEMI was significantly higher than out-of-hospital STEMI, regardless of COVID-19 status. In-hospital COVID-19-negative STEMI patients had a mortality of 33.3% vs in-hospital COVID-19-positive patients with a mortality of 84.6% ($P = 0.015$) (Figure 1). Out-of-hospital COVID-19-negative STEMI patients had a mortality of 8.5% vs out-of-hospital COVID-19-patients with a mortality of 14.3% ($P = 0.474$, likely secondary to $n = 1$ for out-of-hospital COVID-19-positive patient mortality).