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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.

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

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

Xavier Armario,1 Jennifer Carron,3 Mohamed Abdel-Wahab,3 Didier Tchetché,1 Sabine Bleiziffer,2 Thierry Lefèvre,6 Thomas Modine,4 Alexander Wolf,8 Thomas Pilgrim,2 Pedro Villablanca,2 Michael Cuntzinger,4 Nicolas Van Mieghem,1 Christian Hengstenberg,13 Lars Sondergaard,14 Martin Swaans,1 Bernard Prendergast,1,5 Marco Barbanti,1 John Webb,6 Neal Uren,1 Jon Resar,1 Mao Chen,1 David Hildick-Smith,5 Mark Spence,1 David Zweiker,4 Rodrigo Bagur,11 Hospital de Cruz Roja,11 Flavio Ribichini,12 Duk-Woo Park,12 Pablo Codina,12 Joanna Wykrzykowska,12 Matjaz Bunc,12 Rodrigo Estevez-Loureiro,12 Karl Poon,13 Matthias Görgeb,14 Hüseyin Ince,13 Azeem Latib,15 Erik Packer,12 Mario Angelillis,1 Ysusuke Kobari,1 Luis Nombela-Franc,1 Yayangong Guo,1 Mikko Savontaus,1 Amr A. Arafat,1 Chad Kliger,4 David Roy,1 Béla Merkely,46 Mariana Silva,13 Jonathon White,1 Masanori Yamamoto,9 Pedro Carrilhro Ferreira,12 Stefan Toggweiler,1 Yohei Ohno,1 Ines Rodrigues,1 Soledad Ojeda,8 Vasileios Voudris,5 Marek Grygier,1 Khaled Almerri,1 Ignacio Cruz-Gonzalez,1 Vilhelm Fridrich,1 Jose De la Torre Hernandez,6 Nicola Plaza,13 Stephane Noble,12 Dabit Arzamendi,6 Ibrahim halil Kurt,4 Johan Bosmans,15 Martins Egrins,16 Ivan Casserly,7 Fadi Sawaya,6 Ravinay Bhindi,1 Juefe Kefer,1 Wei-Hsian Yin,7 Liesbeth Rosseel,7 Hsien-Li Kao,7 Antonio Dager,9 Wacin Buddhari,9 Hyo-Soo Kim,73 Stephen O Reilly,74 Farrel Hellig,9 Matias Szefman,1 Oscar Mendiz,27 Fabio Brito Jr,76 Vilhelms Bajoras,16 Mohammed Balghith,16 Michael Kang-Yin Lee,62 Guering Eid-Lidt,27 Bert Vandelo,1 Vincent Vaz,1 Mirvat Alsagaf,1 Gian Paolo Ussia,1 Jorge Mayol,1 Gennaro Sardella,1 Wacin Buddhari,9 Hsin-Li Kao,7 Antonio Dager,9 Apostolos Tzikas,9 Ahmad Edris,9 Luis Gutierrez,9 Eduardo Arias,9 Adolfo Ferrero Guadagnoli,9 Ahmed Eldinigu,9 Luciano Santos,102 Louis Perez,15 Gabriel Maluenda,1 Ali Raza Akyuz,4 Imad Alhaddad,5 Haitham Amim,6 So Chai Lee,1 Arif Alnooryani,109 Juan Albitur,110 Quang Nguyen,11 Darren Mylotte12

1Hospital Universitari Germans Trias i Pujol, Barcelona, Spain; 2Galloway Cardiology, Cardiology, Cardiology; 3Mayo Clinic, Rochester, Minnesota, USA; 4Mayo Clinic; 5Duke University Medical Center, Durham, North Carolina, USA; 6Mayo Clinic; 7St. Louis University Hospital, St. Louis, Missouri, USA; 8University Hospital, Hannover, Germany; 9University of Sao Paulo, Sao Paulo, Brazil; 10Imperial College London, London, United Kingdom; 11Hospital Universitari Germans Trias i Pujol, Barcelona, Spain; 12Mayo Clinic, Rochester, Minnesota, USA; 13Medical University of Vienna, Vienna, Austria; 14University Hospitals Leuven, Leuven, Belgium; 15Hospital Universitario Ramón y Cajal, Madrid, Spain; 16The Heart Hospital, London, United Kingdom; 17AOU Policlinico “G. Rodolico-San Marco,” Catania, Italy; 18St. Paul’s Hospital, Vancouver, British Columbia, Canada; 19Edinburgh Heart Centre, Edinburgh, United Kingdom; 20Johns Hopkins University School of Medicine, Baltimore, Maryland, USA; 21West China Hospital, Chengdu, Sichuan, China; 22Royal Brompton Hospital, London, United Kingdom; 23University Hospitals Leuven, Leuven, Belgium; 24Medical University of Graz, Graz, Austria; 25London Health Sciences Centre, London, Ontario, Canada; 26CHLO, Carnaxide, Portugal; 27Università di Verona, Verona, Italy; 28Asan Medical Center, Seoul, Republic of Korea; 29Rabin Medical Center, Petach Tikwa, Israel; 30UMC Groningen, Groningen, the Netherlands; 31University of Antwerp, Antwerp, Belgium; 32AOU Policlinico “G. Rodolico-San Marco,” Catania, Italy; 33St. Paul’s Hospital, Vancouver, British Columbia, Canada; 34Skane University Hospital, Lund, Sweden; 35University of Szeged, Szeged, Hungary; 36Monte Carlo Cardiac Center, Monaco; 37University of Florence, Florence, Italy; 38University of Genoa, Genoa, Italy; 39The Prince Charles Hospital, Brisbane, Queensland, Australia; 40Hospital Universitario de Navarra, Pamplona, Spain; 41Rabin Medical Center, Petach Tikwa, Israel; 42 Royal Brompton Hospital, London, United Kingdom; 43University of Florence, Florence, Italy; 44Istituto Cardiovascrale Paris Sud, Ramsay Santé, Massy, France; 45University of Hong Kong, Hong Kong, China; 46University of Alcalá, Alcalá de Henares, Spain; 47University of Burgundy, Dijon, France; 48Rochester Regional Health, Rochester, New York, USA; 49University of Gramado, Gramado, Brazil; 50Erasmus Medical Center, Rotterdam, the Netherlands; 51Hospital Universitario de Navarra, Pamplona, Spain; 52University of Graz, Graz, Austria; 53University of Porto, Porto, Portugal; 54University of Granada, Granada, Spain; 55University of Athens, Athens, Greece; 56University of Muenster, Muenster, Germany; 57Catholic University of Leuven, Leuven, Belgium; 58University of Athens, Athens, Greece; 59Hospital Carlos III, Madrid, Spain; 60University of Michigan, Ann Arbor, Michigan, USA; 61University of Michigan, Ann Arbor, Michigan, USA; 62University of Michigan, Ann Arbor, Michigan, USA; 63University of Michigan, Ann Arbor, Michigan, USA; 64Bosphorus University, Istanbul, Turkey; 65Emory University, Atlanta, Georgia, USA; 66Wayne State University, Detroit, Michigan, USA; 67Department of Internal Medicine, University Hospital, Cleveland, Ohio, USA; 68Wayne State University School of Medicine, Detroit, Michigan, USA; and the 69Wayne State University School of Medicine, Detroit, Michigan, USA

BACKGROUND Cardiovascular diseases and direct 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: 1.14-1.56; P = 0.017), history of hypertension (HR: 1.5; 95% CI: 1.08-2.1; P ≤ 0.001), during admission (HR: 3.02; 95% CI: 2.36-3.88; P < 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.
Spain, 47West China Hospital, Chengdu, Sichuan, China; 48Turku University Hospital, Turku, Finland; 49Prince Sultan Cardiac Center, Riyadh, Saudi Arabia; 44Hofstra School of Medicine, New York, New York, USA; 50St. Vincent’s Hospital, Sydney, New South Wales, Australia; 46Semmelweis University Heart and Vascular Center, Budapest, Hungary; 51Centro Hospitalar de Vila Nova de Gaia/Espinho, Vila Nova de Gaia, Portugal; 52Auckland Hospital, Auckland, New Zealand; 53T oyohashi Heart Center, Toyohashi, Japan; 54Cardiology Department, Santa Maria University Hospital, CHLN, CAML, CCUL, Faculty of Medicine, University of Lisbon, Lisbon, Portugal; 55Luzerner Kantonalhospital, Luzern, Switzerland; 56Tokai University, Isehara, Japan; 57Hospital Santa Marta, Lisbon, Portugal; 58Reina Sofia Hospital, Córdoba, Spain; 59O nasis Cardiac Surgery, Athens, Greece; 60Poznan University of Medical Sciences, Poznan, Poland; 57Chest Diseases Hospital, KUWAIT, Kuwait; 61University Hospital of Salamanca, Salamanca, Spain; 62NUSCH, Bratislava, Slovakia, Bratislava, Slovakia; 63Hospital Universitario Marques de Valdecilla, Santander, Spain; 64McGill University Health Center, Montreal/Quebec, Quebec, Canada; 65Hôpitaux Universitaires De Geneve, Geneva, Switzerland; 66Hospital de la Santa Creu i Sant Pau, Barcelona, Spain; 67Adana, Seyhan, Turkey; 68University of Antwerp, Antwerp, Belgium; 69Pauls Stradiņš University Hospital, Riga, Latvia; 70Mater Hospital, Dublin, Dublin, Ireland; 71American University of Beirut Medical Center, Beirut, Lebanon; 72Royal North Shore Hospital, Sydney, New South Wales, Australia; 73Universite Libre de Bruxelles, Brussels, Belgium; 74Cheng Hsin General Hospital, Taipei, Taiwan; 75Algemeen Stedelijk Ziekenhuis, Hofstade, Belgium; 76Seoul National University Hospital, Seoul, Republic of Korea; 77St. James’ Hospital, Blackrock, Dublin, Ireland; 78Sunnингhill Hospital /University of Cape Town, Johannesburg, South Africa; 79Sanatorio Finochietto/Sanatorio Guemes, Buenos Aires, Argentina; 80Fundacion Favaloro, Buenos Aires, Argentina; 81Mater Dei Hospital, Msida, Malta; 82Heart Institute, University of Sao Paulo Medical School, Sao Paulo, Brazil; 83Vilnius University Hospital Santaros Klinikos, Vilnius, Lithuania; 84King Abdu lbaziz Cardiac Center, Jeddah, Saudi Arabia; 85Queen Elizabeth Hospital, Hong Kong, China; 86Instituto Nacional de Cardiologia, Mexico City, Federal District, Mexico; 87Cardiovascular Center, Universitair Ziekenhuis Brussel (UZB), Vrije Universiteit Brussel (VUB), Brussels, Belgium; 88Anis Rassi Hospital, Goiania, Goias, Brazil; 89King Fahd Armed Forces Hospital, Jeddah, Saudi Arabia; 90Campus Bio-Medico University, Rome, Italy; 91Sanatorio Americana, Montevideo, Uruguay; 92Policlinico Umberto I University, Rome, Italy; 93King Chulalongkorn Memorial Hospital, Bangkok, Thailand; 94National Taiwan University Hospital, Taipei, Taiwan; 95Angiografia De Occidente, Cali, Colombia; 96AHEPA University Hospital, Thessaloniki, Greece; 97Cleveland Clinic Foundation, Laguna Niguel, California, USA; 98Hospital Clinica Biblica, Escazu, Costa Rica; 99National Institute of Cardiology, Mexico City, Federal District, Mexico; 100Health Science University, Mehmet Akif Eryüth Thoracic and Cardiovascular Surgery Training and Research Hospital, Istanbul, Turkey; 101Instituto Nacional Del Corazon, Lima, Peru; 102Dedinje Cardiovascular Institute, Belgrade, Serbia; 103Hospital Privado Universitario de Córdoba, Córdoba, Argentina; 104Magdi Yacoub Heart Foundation, Cairo, Egypt; 105Hospital Santa Luzia, Brasilia, Distrito Federal, Brazil; 106Hospital Gmo. Grant Benavente, Concepción, Chile; 107San Borja Arriaran Hospital & University of Chile, Santiago, Chile; 108Trabzon Ahi Evren Göğüs Kalp ve Damar Cerrahisi Egitim ve Arastirma Hastanesi, Trabzon, Turkey; 109The Jordan Cardiovascular Center, Amman, Jordan; 110BDF Hospital, Manama, Bahrain; 111King Fahd Armed Forces Hospital, Hong Kong; 112Alqassimi Hospital, Sharjah, United Arab Emirates; 113Hospital de Clinicas Dr Manuel Quintela, Montevideo, Uruguay; 114Vietnam National Heart Institute, Hanoi, Vietnam; and the 115University College Hospital Galway, Galway, Ireland

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 Lindsey Clark, Mohammed Ebrahim, Fangcheng Wu, Jianli Niu, Jonathan Roberts

Background West Hospital, Miami, Florida, USA; 2Memorial Healthcare System, Pembroke Pines, Florida, USA; 3Memorial Healthcare System, Miramar, Florida, USA; 4Memorial Cardiac and Vascular Institute, Memorial Regional Hospital, Memorial Healthcare System, Hollywood, Florida, USA; and the 5Memorial Healthcare System, Hollywood, Florida, USA

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).