**ORIGINAL CONTRIBUTIONS**

**Coronary Artery Disease**

431 Prehospital Prasugrel Versus Ticagrelor in Real-World Patients With ST-Elevation Myocardial Infarction Referred for Primary PCI: Procedural and 30-Day Outcomes

Nicola S. Vos, MD; Giovanni Amoroso, MD, PhD; Maarten A. Vink, MD, PhD; Moniek Maarse, MD; Rob Adams, MS; Jean-Paul R. Herrman, MD, PhD; Mark S. Patterson, MD, PhD; René J. van der Schaaf, MD, PhD; Ton Slagboom, MD; Robbert J. de Winter, MD, PhD

Pretreatment with P2Y$_{12}$ inhibitors before primary percutaneous coronary intervention can reduce the incidence of major adverse cardiovascular event in ST-segment elevation myocardial infarction patients. We investigated differences in coronary reperfusion and clinical outcomes between prehospital administration of prasugrel vs ticagrelor in a historical cohort analysis.

**Transcatheter Aortic Valve Replacement**

437 Balloon Valvuloplasty Followed by Transcatheter Aortic Valve Implantation as a Staged Procedure in Patients With Low-Flow Low-Gradient Aortic Stenosis

Kerstin Piayda, MD; Anna Christina Wimmer, BA; Verena Veulemans, MD; Shazia Afzal, MD; Horst Sievert, MD; Sameer Gafoor, MD; Amin Polzin, MD; Christine Quast, MD; Christian Jung, MD, PhD; Ralf Westenfeld, MD; Malte Kelm, MD; Katharina Hellhammer, MD; Tobias Zeus, MD

Balloon aortic valvuloplasty (BAV) as a bridge to transcatheter aortic valve implantation (TAVI) is a well-established treatment option in patients who are in a critical state or who suffer from underlying comorbidities that disguise the severity of aortic stenosis (AS). If convalescence is achieved, TAVI can be performed with good results in high-gradient AS patients, but this treatment has not been studied in low-flow low-gradient AS patients; therefore, we investigated whether BAV followed by TAVI as a staged procedure is an effective treatment option in patients with low-flow low-gradient AS.

**Coronary Artery Disease**

443 Clinical and Angiographic Outcomes Comparison of Patients With Left Main Vs Non-Left Main Bifurcation Lesions Treated With Percutaneous Coronary Intervention With Second-Generation Drug-Eluting Stents

Ruben Vergara, MD; Renato Valenti, MD; Angela Migliorini, MD; Michele Ciabatti, MD; Maria Grazia De Gregorio, MD; Giulia Taborchi, MD; Sofia Morini, MD; Roberto Rondine, MD; Raffaele Martone, MD; David Antoniucci, MD

We prospectively analyzed all consecutive patients treated at our center for bifurcation lesions from 2011-2015, including those with acute myocardial infarction and cardiogenic shock, and compared the angiographic and clinical outcomes of patients with left main bifurcation lesions vs those with non-left main bifurcation lesions treated with percutaneous coronary intervention and second-generation drug-eluting stent implantation.

**Transcatheter Aortic Valve Replacement**

447 Validation of STS/ACC TVT-TAVR Score in Veterans Undergoing Transcatheter Aortic Valve Replacement

Christopher Reiff, MD; Sergey Gasevich, MD; Stefan Bertog, MD; Paul Soaija, MD; Rosemary Kelly, MD; Santiago Garcia, MD

The Society of Thoracic Surgeons/American College of Cardiology transcatheter valve therapy (TVT) transcatheter aortic valve replacement (TAVR) score was developed to predict in-hospital mortality in patients undergoing commercial TAVR in the United States. However, Veterans Health Administration (VA) hospitals are not included in the TVT registry. Therefore, we examined a population of veterans to see if the score was valid for prediction in a VA population.
Peripheral Vascular Disease
452 Predicting Iliac Vein Compression With Computed Tomography Angiography and Venography: Correlation With Intravascular Ultrasound
Nicolas W. Shammas, MD, MS; Gail A. Shammas, BS, RN; Sue Jones-Miller, MS; Qais Radaideh, MD; Allyson R. Winter, DO; Andrew N. Shammas, BS; Istvan Z. Kovach, RA; Basel Bou Dargham, MD; Ghassan E. Daher, MD; Rayan Jo Rachwan, MD; W. John Shammas, BS; Walied Omar, BS; Aman Manazir, RA; Srikanth Kasula, MD
Intravascular ultrasound (IVUS) is considered the gold standard in diagnosing common iliac vein (CIV) compression. The presence of >50% surface area reduction by IVUS is considered significant compression by most operators. Thus, we evaluated the role of computed tomography angiography and venography in diagnosing CIV compression when compared to IVUS.

Coronary Artery Disease
456 Outcomes of Extracorporeal Membrane Oxygenation Support for Complex High-Risk Elective Percutaneous Coronary Interventions: A Single-Center Experience and Review of the Literature
Arslan Shaukat, MD; Katarzyna Hryniewicz-Czenezew, MD; Benjamin Sun, MD; Karol Mudy, MD; Kelly Wilson, RN; Peter Tajti, MD; Larissa Stanberry, PhD; Ross Garberich, MS, MBA; Yader Sandoval, MD; M. Nicholas Burke, MD; Iordan Chaves, MD; Maria Goss, MD, PhD; Timothy Henry, MD; Daniel Lips, MD; Michael Mooney, MD; Anil Poulou, MD; Paul Sorajja, MD; Jay Traverse, MD; Yale Wang, MD; Steven Bradley, MD, MPH; Emmanuel S. Brilakis, MD, PhD
Venoarterial extracorporeal membrane oxygenation (VA-ECMO) is most commonly used in patients with cardiac arrest and cardiogenic shock. We examined the in-hospital and mid-term clinical outcomes in patients undergoing complex, high-risk PCI with VA-ECMO support.

Radial Access Technique
461 Different Spasmolytic Regimens (Nitroglycerin vs Verapamil) and the Incidence of Radial Artery Occlusion After Transradial Catheterization
Surya Dharma, MD, PhD; Sasko Kedev, MD, PhD; Tejas Patel, MD; Sunil V. Rao, MD; Ian C. Gilchrist, MD
This study evaluated whether the use of different spasmolytic regimens (nitroglycerin or verapamil) administered soon after sheath insertion affected postprocedure radial artery occlusion in patients who underwent transradial catheterization.

Coronary Artery Disease
465 Clinical Outcomes of Atherectomy Prior to Percutaneous Coronary Intervention: A Comparative Assessment of Atherectomy in Patients With Obesity (COAP-PCI Subanalysis)
Rajkumar Doshi, MD, MPH; Evan Shlofmitz, DO; Krunalkumar Patel, MD; Prewaiz Meraj, MD
Atherectomy is an important tool for lesion preparation in patients with coronary artery calcification (CAC) undergoing PCI. However, there have been no studies that compared the outcomes of orbital atherectomy and rotational atherectomy in obese patients. Therefore, the aim of this study was to investigate the safety and efficacy of atherectomy devices in obese patients with CAC.
REVIEW/ORIGINAL CONTRIBUTION

E131 Hybrid Coronary Revascularization vs Complete Coronary Artery Bypass Grafting for Multivessel Coronary Artery Disease: A Systematic Review and Meta-Analysis
Sabrina Nolan; Kristian B. Filion, PhD; Renee Atallah, MSc; Emmanuel Moss, MD, MSc; Pauline Reynier, MSc; Mark J. Eisenberg, MD, MPH
Hybrid coronary revascularization (HCR) has emerged as a potential alternative to surgery. However, the efficacy and safety of HCR versus coronary artery bypass grafting remain unclear. We therefore conducted a systematic review and meta-analysis of 9 cohort studies and 1 randomized controlled trial to compare these interventions.

LETTER TO THE EDITOR

E150 Suggesting a New Primary Access Site for Treating Chronic Total Occlusions: Bilateral Distal Transradial Intervention (bdTRI)
Irzal Hadžibegović, MD, PhD and Boris Starčević, MD, PhD
Bilateral distal transradial intervention is a new primary access strategy for chronic total occlusion interventions. We provide a brief review of recent studies and offer the rationale behind this promising approach.

CLINICAL IMAGES

E152 Recanalization of Left Subclavian Vein Total Occlusion Jailed by Superior Vena Cava Stent Using Culotte Stenting Technique With a Dedicated Venous Stent
Wai Kin Chi, MBChB; G.M. Tam, MBChB; Bryan P. Yan, FRCP
This case demonstrates that the high radial strength of a dedicated nitinol venous stent is able to achieve good acute angiographic results and clinical efficacy.

E154 Thrombolysis-Guided Primary Percutaneous Coronary Intervention
Georgios Tzanis, MD, PhD; Francesco Giannini, MD; Azeem Latib, MD; Antonio Colombo, MD
A 77-year-old STEMI patient became hemodynamically unstable during attempted PCI, and operators were unable to visualize the right coronary artery ostium despite multiple attempts. Systemic thrombolysis resolved these issues and allowed PCI to proceed. This case highlights that fibrinolysis might still play a key role for some challenging cases in the era of modern PCI.

E155 Snow and Reindeer: Large Tricuspid Valve Mobile Vegetation
Peter C. Olson, MD; Vratika Agarwal, MD; Roman Royzman, MD
A 20-year-old female with history of polysubstance abuse presented with fevers and light-headedness. Blood cultures grew out *Streptococcus constellatus*, which is known to form purulent infections when introduced in the body. Evaluation with transesophageal echocardiogram showed a definite large, irregular, loosely organized, highly mobile vegetation.

E156 Traumatic Fracture of Pacemaker Lead by Suture Transfixation to Pectoral Muscle
Raghav Bansal, MD, DM; Viveka Kumar, MD, DM; K.K. Talwar, MD, DM
We report acute lead fracture during pacemaker implantation. Suturing the lead without the sleeve might damage the lead. To avoid this result, we suggest tying knots tightly, but not too vigorously.