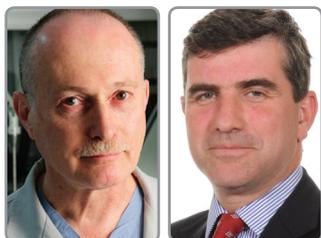


# TAVR: Insights and Perspectives



Percutaneous valve intervention is a disruptive innovation that has transformed the landscape of interventional cardiology. Transcatheter aortic valve replacement

(TAVR) is an established treatment option in inoperable, high-risk, and intermediate-risk patients that is strongly endorsed by both United States and European guidelines, with over 250,000 procedures that have now been performed worldwide. In this issue, we aim to highlight current and future technical innovations and strategic advances that will make this breakthrough treatment available to a wider selection of patients on both sides of the Atlantic.

We open with a review of the current data from the STS/ACC TVT Registry by Frederick L. Grover, MD, and David R. Holmes Jr, MD, who share important insights from several in-depth reports from the ever-growing TAVR population.

Hasan Jilaihawi, MD, then discusses the indispensable resource that CT imaging has become for preprocedural anatomical assessment when performing TAVR. Continuing on the topic of imaging for TAVR, Nishath Quader, MD, examines the use of 2D and 3D echocardiography for aortic annulus sizing, which has become a crucial component of preprocedural planning.

Next, Denise Todaro, MD; Andrea Picci, MD; and Marco Barbanti, MD, share an overview of the clinical and anatomical indications, device features, and clinical outcomes for the current generation of TAVR devices that have received CE Mark or FDA approval. Then, looking ahead to the next generation of devices, Thomas Modine, MD; Darren Mylotte, MD; and Nicolo Piazza, MD, give us a preview of valves that are in early clinical development and aim to offer a greater range of treatment options.

Will TAVR someday eclipse surgical valve replacement as the treatment of choice for aortic stenosis? This is a topic of much discussion today, and

Drs. Andrew Roy, Dinesh Natarajan, and Bernard Prendergast delve into the current body of data that continue to expand the less invasive TAVR approach to lower-risk groups of patients.

To close our TAVR feature, we asked colleagues from three different institutions around the world how they approach TAVR procedures when patients also have significant coronary artery disease. Lowell Satler, MD, and Toby Rogers, MD, from MedStar Washington Hospital Center in Washington, DC; Jubin Joseph, MA, BMBCh, and Simon R. Redwood, MD, from St Thomas' Hospital in London, United Kingdom; and Giuliana Capretti, MD; Alaide Chieffo, MD; and Antonio Colombo, MD, from San Raffaele Scientific Institute in Milan, Italy each share their institution's unique treatment algorithm for addressing these patients.

Shifting focus to an update on hemodynamics, Lokien X. van Nunen, MD, provides a helpful summary of the history and function of intra-aortic balloon pump counterpulsation, as well as a review of the outcomes seen in clinical trials to date studying its utility in percutaneous coronary intervention, acute myocardial infarction, and cardiogenic shock.

Finally, this issue closes with a conversation with Ralph Stephan von Bardeleben, MD, about current mitral valve trials, the use of mitral devices for tricuspid disease, and imaging protocols for transcatheter mitral valve interventions.

We all have a daunting pile of journals on our desks or within our inboxes. Our mission remains to synthesize the vast interventional literature, as well as to bring you forward-looking reviews. We hope this issue meets our mission and your interests. ■

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