AN INTERVIEW WITH...

Josep Rodés-Cabau, MD

Dr. Rodés-Cabau discusses the current landscape of transcatheter valve technologies, as well as his participation in innovative structural heart interventions.

Which aspect of transcatheter aortic valve replacement (TAVR) currently needs the most attention, improvement, and/or innovation?

There have been major advances in transcatheter heart valve technologies in the last few years, with significant improvements in size reduction and delivery system properties; valve deployment, repositioning and retrievability; and avoidance of paravalvular leaks. These advances, along with the increasing experience of centers/operators, has translated into major improvements in TAVR results over time. I think that the problem of conduction disturbances and long-term valve durability are probably two aspects that require more attention in the future.

How did you become involved in a number of first-in-human device experiences? What is the draw, and are there any drawbacks?

This is the combination of various factors. First, I am part of an outstanding cardiology center, the Quebec Heart & Lung Institute, which has a very high volume of cardiac interventions and a high profile for pioneering innovation in cardiology (one of the most important differential factors of our center). Furthermore, we have a clinical setup with highly experienced and skilled multidisciplinary teams. Finally, there is a very rigorous process in place regarding patient selection, procedural preparation, and data collection. Many patients who are not candidates for the usual treatment options have benefited from novel technologies, mainly in the valvular and heart failure space. This is, without any doubt, the main draw of the innovation projects in which I've had the opportunity to participate.

Are you currently involved in research on any mitral valve therapies? In your view, what is the greatest need to be addressed in this area or the greatest hurdle to overcome?

Yes, I'm involved in studies involving transcatheter therapies for treating mitral regurgitation, particularly transcatheter mitral valve replacement. We are in the very early stage of this technology, and future studies that include a much larger number of patients are needed to provide consistent safety and efficacy data on each of the transcatheter mitral valve replacement systems. I think one of the most important aspects that needs to addressed in this field relates to patient selection and how this technology compares with transcatheter mitral valve repair (including MitraClip [Abbott Vascular]). Also, most patients involved in transcatheter mitral valve therapy studies suffer from secondary (vs primary) mitral regurgitation, and definitive data on the efficacy of correcting mitral regurgitation in such patients are still lacking.

Can you share a brief overview of the current status of transcatheter tricuspid valve repair? Where do you see the treatment for tricuspid valve disease headed over the next 5 years?

Multiple technologies have emerged in this field with very promising results in terms of feasibility, safety, and preliminary efficacy. Interestingly, different mechanistic approaches have been used, including improvements in valve coaptation, reducing tricuspid annular dimensions (annuloplasty), or preventing the backflow toward the vena cava (valve implants at the level of inferior/superior vena cava). I view the future of transcatheter tricuspid valve disease repair with a lot of hope. Among other aspects, isolated tricuspid valve surgery is challenging (there is a real need for less invasive therapies), and moderate improvements in the severity of tricuspid regurgitation seem to be associated with significant changes in functional status and quality of life. My word of caution would be regarding the durability of the early effects that we are seeing with these transcatheter technologies.

Can you provide a brief summary of the findings from the WRITTEN survey that you and your colleagues conducted? What was the most common area of consensus among centers performing TAVR? Which area differed the most across centers?

This survey provides a good picture of the current status of TAVR worldwide. The areas with the most consensus was the involvement of the heart team in the decision process

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and the imaging technologies used for case preparation. The areas with the largest variability among centers related to procedural items (eg, general vs local anesthesia), conduction disturbances (duration of temporary pacemaker, management of conduction disturbances), and antithrombotic therapy post-TAVR.

In a recent study, you and your colleagues suggest that there are better ways to evaluate and identify patients who may or may not benefit from TAVR. Can you explain how TAVR risk scores, frailty parameters, and medical comorbidities can help physicians in this regard?

This is a very difficult issue. We know that the surgical risk scores are suboptimal for evaluating the risk of TAVR procedures, and I think that the recent development of TAVR risk scores has been important. However, they are still greatly underused in contemporary practice. Adding frailty parameters will improve risk evaluation and patient selection for TAVR, as well as for many other interventional procedures. However, the final decisions inevitably culminate in a case-by-case scenario, frequently involving patients and families who often have significant expectations. It's rarely an easy process, highlighting the importance of continuously improving patient risk evaluation and involving multidisciplinary team discussions in the clinical decision-making process.

Are drug-eluting stents (DESs) a worthwhile treatment option for sealing intermediate nonobstructive coronary saphenous vein graft (SVG) lesions?

We know that intermediate nonobstructive SVG lesions are at high risk for disease progression leading to clinical events. However, the VELETI II trial failed to demonstrate a significant clinical benefit of sealing these lesions with DESs compared with medical treatment. There are three points I'd like to emphasize here: (1) no safety issues were observed, (2) the trial was stopped prematurely due to slow enrollment, and (3) most DESs used in the trial were first generation (paclitaxel-eluting stents). Also, the trial was negative in part due to a very late (> 2 years) restenosis rate that was higher than expected. A trial with complete enrollment using the latest-generation DESs may have had positive results. However, I do not anticipate another trial like this in the near future, particularly considering the enrollment issues we encountered in VELETI II. ■

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