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IN THIS ISSUE OF EUROINTERVENTION

The PCR London Valves edition with a EuroIntervention State of the Art on transcatheter treatment for tricuspid valve disease; a mini focus on tricuspid regurgitation including tricuspid valve annuloplasty with the Cardioband system, tricuspid valve implantation using the novel LuX-Valve, and the impact of MitraClip mitral valve repair on tricuspid regurgitation; an expert review on coronary access after TAVI, valve-in-valve outcomes with or without bioprosthetic valve fracture, redo TAVI; and more...

Davide Capodanno, *Editor-in-Chief*

Can we finally say that it's OK to return – physically – to a large cardiology event?

Yes, we can – and this issue of EuroIntervention coincides with the welcome return of PCR London Valves, back in the city where it all began. The ambitious goal declared by the Course Directors of this year's edition is to reunite the global PCR Valve Community in a hybrid style accessible throughout the world regardless of time zone.

We've learned a lot these past months about what it means to take part in one of these events, and we now know that it can be just as rewarding – even if ultimately

the experience is different – to offer the choice of being present in person or participating remotely. Still, there is a target audience in London of around 1,000 participants and who knows how many will connect throughout the world.

The course will last three days with three professional studios broadcasting live from the Congress venue: the Main Arena, Channel 2 and the Simulation Lab.

- The Main Arena will be dedicated to daily discussions around the new international guidelines on valvular heart disease, updates on seminal studies, devices, and innovations, as well as the traditional late-breaking trials and best-case submissions. Virtual live cases this year will be broadcast from the Clinique Pasteur (Toulouse, France), St Thomas' Hospital (London, United Kingdom) and San Raffaele University Hospital (Milan, Italy).
- Channel 2 will be the education channel, focusing on very practical topics such as imaging, procedural refinement, complications and the so-called “lifetime valve journey”.
- The Simulation Lab will feature a 3-day educational pathway encompassing learning centres, simulations, workshops, and hands-on training.

In addition, building upon the experience acquired during the PCR Valves e-Course 2020 and EuroPCR 2021, there will be six global hubs, local pods, live interactions with the London studios and, in several locations away from the Congress centre itself, in-person gatherings of local physicians, with everyone, of course, following a strict sanitary protocol.

Will this be the best of both the real and virtual worlds? The Course Directors hope so, and everything will be in place to make it work. In the meantime, as we prepare to enjoy our “new normal” and the well-deserved reunion of our vibrant valve community, let's turn to this special issue of EuroIntervention which is dedicated to the PCR London Valve's course in the way we know best – a series of articles on the subject of valvular heart disease that I will introduce to you right away.

We begin with a EuroIntervention State of the Art on the implications of endovascular treatment of tricuspid valve disease and tricuspid regurgitation (TR). **Fabien Praz, Francesco Maisano and colleagues** provide a review of the different types of clinically relevant primary and secondary TR reminding us that, regardless of its origins, tricuspid regurgitation leads to more tricuspid regurgitation, through its negative manifestations of volume overload, increased wall stress and negative remodelling. Undertreated due to late diagnosis or increased surgical risk, the transcatheter tricuspid valve interventions described in this article all aim to respond to this unmet need. Patient selection, devices, integration in a Heart Team's interdisciplinary approach, as well as challenges and future directions, are all discussed.

Tricuspid regurgitation is also the subject of our mini focus, beginning with an article by **Georg Nickenig, Stephan Windecker and colleagues** reporting on the TriBAND post-market clinical follow-up study, evaluating the safety and effectiveness of the Cardioband tricuspid valve reconstruction system. At 30 days, in a population comprised of patients with severe TR who have had no treatment alternatives until now, there were significant, positive results with reductions in tricuspid annular diameter and TR severity, along with functional improvements as well as improvements in the quality of life for these patients. This article is accompanied by an editorial by **Nicole Karam and Jörg Hausleiter**.

The TR mini focus continues with an article by **Zhenxing Sun, Mingxing Xie and colleagues** on transcatheter tricuspid valve replacement using the novel LuX-Valve.

As surgical treatment for TR has high mortality, transcatheter tricuspid valve replacement offers a much-needed alternative. This novel device appears promising, showing itself to be safe and feasible at 12-month follow-up for patients at high surgical risk with severe functional TR.

It has been several years now since the MitraClip entered our armamentarium for treating mitral valve disease. Here, in our mini focus, **Refik Kavsur, Marc U. Becher and colleagues** look at the MitraClip again, but this time from the perspective of the impact mitral valve repair could have on TR. In this large multicentre study, the authors looked at time-dependent alterations of TR in patients after transcatheter mitral valve repair. Their findings show a reduction in the relevant concomitant TR at three months with three parameters preventing TR improvement - atrial fibrillation, post-procedural residual mitral regurgitation and tricuspid annular diameter. TR improvement and tricuspid annular diameter <34 mm at this follow-up period were markers associated with lower rates of post-procedural heart failure hospitalisation.

Leaving the tricuspid valve, we turn to **Roberto Valvo, Marco Barbanti and colleagues** who offer an expert review on coronary access after transcatheter aortic valve implantation (TAVI). With indications for TAVI expanding to a younger set of patients with greater life expectancy, the treatment's longevity increases along with the need for additional valve interventions as these patients grow older. While transcatheter aortic valve durability has been studied and repeat TAVI shown to be a feasible option in cases of transcatheter aortic valve degeneration, the question of coronary artery cannulation after TAVI needs further investigation. This and similar questions are treated here: the future success rate for coronary angiography in these patients, determining the specific conditions which would make coronary access after TAVI difficult or not feasible at all, and how different valve designs or aortic root architecture affect these interventions. The authors also look ahead to what will certainly be increasingly common in our future practice.

The technique of bioprosthetic valve fracture, employed in valve-in-valve TAVI procedures, has never been compared to valve-in-valve TAVI alone. In their article, **Christina Brinkmann, Joachim Schofer and colleagues** note that the use of valve-in-valve TAVI using bioprosthetic valve fracture resulted in significantly lower transvalvular gradients both acutely and at follow-up. They determined that the use of self-expanding transcatheter heart valves (THV) in the treatment of certain types of surgical aortic valves were predictors of lower gradients. Their research can offer guidance for future treatment strategies and device choices. This article is accompanied by an editorial by **Josep Rodés-Cabau and Alberto Alperi**.

While we know the success of implanting THVs in failed surgical valves, do we know if we would have the same results if we needed to implant THVs in failed THVs themselves? This is the subject of the preclinical research highlighted in an article by **Janarthanan Sathanathan, John G. Webb and colleagues**. They conclude that most THV designs and implantation strategies would result in favourable hydrodynamic performance in the setting of THV-in-THV procedures, with the design and dimensions of failed THVs an important consideration in choosing the optimal design, sizing and positioning of a THV for redo TAVI. This article is accompanied by an editorial by **Patrick W. Serruys, Osama Soliman and colleagues**.

Now, let's turn the page and let the articles speak for themselves.