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IN THIS ISSUE OF EUROINTERVENTION

A State-of-the-Art on in-stent restenosis; a mini focus on drug-eluting stents and drug-coated balloons; optical coherence tomography criteria of suboptimal stent deployment; cerebral embolism and transcatheter edge-to-edge repair of the mitral valve; leaflet-to-annulus index and residual tricuspid regurgitation after transcatheter repair; and more...

Davide Capodanno, *Editor-in-Chief*

I asked the fantastic EuroIntervention production team to let me send this text in at the very last moment before our publication deadline. Why? Because I wanted to be sure to draw my inspiration directly from EuroPCR itself and then write it all immediately on my way back from the meeting. This way, I would be sure to capture and synthesise my most spontaneous emotions – before I return to my daily routine.

If I hadn't been given the time and had been obliged to write this before EuroPCR's return to an "in person" meeting, I probably would have imagined it in the same way. Still, certain aspects have actually exceeded my expectations. First of all, the weather (what a trivial way to start, right?). It will not have escaped the most assiduous visitors of EuroPCR that for once we were blessed by a tropical climate (even too much so) instead of the usual downpours. But the ever present and seemingly never-ending

roadworks around the Palais des Congrès fortunately gave us that sense of familiarity, reminding us that basically everything is as it has always been (they were there before the pandemic, they were there this year, and they will probably be there in the years to come).

Seriously though, this was my first EuroPCR as EuroIntervention Editor-in-Chief, and this editorial is not enough to express how much I appreciated the feedback and advice I received from all the people I met. In the first “open” Editorial Board at the Congress, which restored a tradition I loved so much in the past, we presented facts and figures of the Journal, we gave awards to our best authors, reviewers and Editors, and we felt the closeness of many friends and observers of the Journal.

We will be able to discuss in more detail the results of these episodes, the inspiration that came from them and the resulting actions. For now, I limit myself to just one, heartfelt, “thank you”. That said, as always, let’s shift gears and move on to the contents of this issue.

This issue has a mini focus on drug-eluting stents (DES) and drug-coated balloons (DCB) and we begin with a EuroIntervention State-of-the-Art on the management of in-stent restenosis (ISR). Even in our era of newer stents, ISR remains the most common cause of stent failure after percutaneous coronary intervention (PCI), accounting for up to 10% of failures. With the increase in the number and complexity of cases treated by PCI, authors **Fernando Alfonso, Robert A. Byrne and colleagues** address questions concerning the proper management of ISR, with an overview of current ideas underlying diagnosis and classification of ISR as it affects treatment choices. They discuss current evidence suggesting that DES and DCB are the best treatment options for a majority of ISR cases. They consider intravascular imaging which can provide useful information to guide treatment decisions in ISR-PCI, as well as future ISR interventional paradigms which could be guided by ISR tissue patterns determined using intravascular imaging as well.

In the mini focus, an article by **Julia Ellert-Gregersen, Evald Høj Christiansen and colleagues** reports two-year outcomes from the SORT OUT IX trial comparing a polymer-free DES (BioFreedom) with a biodegradable polymer DES. Previously, the results of the BioFreedom stent at one year did not meet the non-inferiority criteria for target lesion failure (TLF) compared to the latest generation of biodegradable polymer DES. The 2-year results of this trial did not show significant differences in TLF between stent types, though there was an increased risk of target lesion revascularisation with the BioFreedom stent. The article is accompanied by an editorial by **Pieter C. Smits**.

In the next article of the mini focus, **Lorenz Räber, Patrick Siegrist and colleagues** offer a first-in-man study of another polymer-free stent, the BIOrapid stent. The BIOVITESSE study was conducted to assess the safety and clinical performance of the BIOrapid stent system that incorporates a highly lipophilic sirolimus derivate coating to allow for shorter periods of dual antiplatelet therapy. While proven safe and clinically effective in treating

de novo coronary artery lesions, with a level of late lumen loss that confirms the antirestenotic efficacy of the platform, the overall results suggest a lower efficacy than observed with other modern thin-strut DES. The authors conclude that it could be worthwhile to have a newer iteration of the device with a higher drug dose.

In certain populations DCB have been shown to be non-inferior to DES, but is there a difference in the resulting coronary vasomotion between patients who have been treated using either of these devices? This was the question behind the study of **Tsutomu Kawai, Masatake Fukunami and colleagues** who saw that endothelial function was better preserved in coronary vessels treated with DCB than with new-generation DES. As endothelial dysfunction after PCI could lead to serious cardiac events, the authors conclude that the use of DCB for *de novo* coronary lesions can provide better results, reminding us of the beneficial effects of the concept of “leaving nothing behind”.

In another article in the coronary interventions section, **Francesco Prati, Gary S. Mintz and colleagues** looked at the CLI-OPCI registry to study long-term data concerning the use of optical coherence tomography (OCT) in PCI, specifically on suboptimal stent implantation in patients who experienced device-oriented cardiovascular events. They found that suboptimal criteria determined through the use of OCT for stent implantation were related to worse clinical outcomes at very long-term follow-up, an observation which supports the use of OCT-guided strategies for stent deployment. This article is accompanied by an editorial by **Takashi Kubo and Gaku Nakazawa**.

In an observational study in the field of valvular disease and heart failure, authors **Tim Bastian Braemswig, Alexander Lauten and colleagues** address the question of why, after transcatheter edge-to-edge repair of the mitral valve (TEER-MV), a large percentage of patients have new ischaemic brain lesions. The authors used transcranial Doppler to look for microembolic signals in patients who received TEER-MV with the MitraClip, discovering that these signals occurred primarily during device interaction with the mitral valve. Cerebral embolisation appears to be immanent to the procedure itself, occurring during the interaction between the device and the valve, leading the authors to call for improving the procedural steps to seek ways to minimise this occurrence. The article is accompanied by an editorial by **Philipp Lurz and Christian Besler**.

In an article on the treatment of tricuspid regurgitation (TR) by transcatheter edge-to-edge repair (TEER), **Tetsu Tanaka, Marcel Weber and colleagues** examined the association of the leaflet-to-annulus index (LAI) with residual TR after TEER. Residual TR after TEER is a predictor of mortality and heart failure and, as leaflet-to-annulus mismatch appeared to be associated with residual TR, LAI evaluation could be seen as a possible decision-making tool in the management of TR by identifying those tricuspid valves suitable for TEER.

Now that we've made the introduction, let's let the articles speak for themselves.