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Our 20th anniversary EuroPCR edition with a state-of-the-art on the treatment of patent foramen ovale; an expert review of leaflet modification techniques during TAVI; long-term structural valve deterioration after TAVI; ticagrelor monotherapy; cangrelor in acute and chronic coronary syndromes; rationale and design of the COMPARE STEMI ONE trial; OCT versus IVUS in patients with and without acute coronary syndromes; and more

Davide Capodanno, *Editor-in-Chief*

EuroIntervention turns 20 this year. At the conclusion of this opening editorial, which coincides with another outstanding edition of EuroPCR, we will commemorate this milestone by revisiting the most impactful and cited studies published over the past two decades. While the occasion might invite rhetorical flourishes – and we admit we are tempted – we must first pay tribute to the Journal itself and its founding visionaries, as well as to our community. We should never forget that this is a Journal animated by a commitment to exchange and sharing – the principle of “by and for” – where reviewers form a cohesive group of professionals deeply familiar with the field, offering a pragmatic and practice-oriented perspective on what is worth reading in today’s landscape.

We have aimed to strike a balance between academic rigour and practical relevance. After years of refinement and strategic choices, we hope this equilibrium has been achieved. However, while this anniversary is a time to celebrate, excessive retrospection or nostalgia would be misplaced. The real challenge lies ahead – particularly with the

emergence of artificial intelligence (AI). Personally, I am more intrigued than alarmed by this evolution. Ignoring it is futile, as it is already permeating many facets of our lives, often in subtle ways.

Harnessing AI

It is far more compelling to embrace AI, seeking creative and efficient applications – though this requires human intelligence. Many aspects of editorial work are inevitably bound to evolve. How, exactly, remains uncertain. Nonetheless, we have already automated several backend processes via Cory, our virtual assistant, including article indexing and reading suggestions.

Whether AI will eventually replace peer review, copyediting, or – more provocatively – authorship itself, is a disconcerting possibility. Yet, it is a scenario that editors and publishers, not only in scientific publishing, will need to confront. The widespread use of generative imagery, such as the “Ghibli-style” transformations currently circulating online, illustrates both the seductive appeal of these technologies and the tangible risk of copyright infringement. This issue will undoubtedly extend to textual content.

Our commitment is to protect human creativity while simultaneously striving to understand and responsibly harness new technologies. EuroIntervention has consistently positioned itself at the forefront of innovation throughout its 20-year history, and it will continue to do so in the years ahead.

There is one element, however, that we do not intend to change – at least for now – because reader feedback confirms its value: the “bird’s eye” summary of the articles you will find in this printed edition, so let’s dive in.

Focusing on key topics

We begin this issue with a state-of-the-art on the treatment of patent foramen ovale by **Christian Pristipino, Lars Sondergaard and colleagues**. Although the intervention itself has been refined and standardised over the past 48 years and remains relatively straightforward, the management of the overall process is complex, requiring in-depth knowledge to tailor the procedure to each patient. This state-of-the-art is a guide to patient selection, assessing PFO causality, challenging anatomical characteristics, and best practices for imaging, device selection and procedural efficacy and safety.

Although there is no way to eliminate the risk of coronary obstruction during transcatheter aortic valve intervention (TAVI), several techniques and devices have been developed to help mitigate this risk. In an expert review, **Sunny Goel, Gilbert H.L. Tang and colleagues** provide an expansive discussion on the currently available leaflet modification techniques to prevent coronary obstruction during TAVI. The review covers the procedural complexities, required equipment, and clinical outcomes of the BASILICA, CATHEDRAL, and UNICORN techniques, and of devices such as ShortCut, Splitter, and TELLTALE.

This issue also includes two very timely viewpoints. In the first, **Martine Gilard and the PCR Board** share their thoughts on the paths available to Europe’s medical device industry in these times of upheaval and uncertainty to ensure the primacy and vitality of research and innovation for our speciality. Next, **Sanjay Kaul** comments on the approval by the U.S. Food and Drug Administration of two transcatheter devices and considers the role that bias and the placebo effect may play in unblinded trials.

Original research

As always, we present several original research articles, the first being one from the European Valve Durability TAVI Registry. Developed to assess the prevalence of structural valve deterioration (SVD) in a living patient cohort who underwent TAVI at least 5 years previously, **Cristina Giannini, Anna Sonia Petronio and colleagues** present analyses based on the cumulative incidence of moderate to severe SVD in the overall population as well as by transcatheter heart valve (THV) design (supra- vs intra-annular). Their data demonstrate that the haemodynamic function of the first-generation THVs has remained stable up to 10 years, with a relatively low rate of moderate to severe SVD. Older-generation intra-annular THVs and smaller-sized devices had higher rates of SVD.

Next, in a *post hoc* analysis of the TWILIGHT trial, **Mauro Gitto, Roxana Mehran and colleagues** compare ticagrelor monotherapy and ticagrelor-based dual antiplatelet therapy (DAPT) after percutaneous coronary intervention (PCI) in chronic coronary syndrome patients with or without high ischaemic risk. Regardless of their ischaemic risk status, those who received ticagrelor monotherapy after a 3-month DAPT course had a similar incidence of ischaemic and bleeding events at 1 year as those who received standard ticagrelor DAPT, opening the door to a potential expansion of current guideline indications. This article is accompanied by an editorial by **Hirotoishi Watanabe and Takeshi Kimura**.

An article on the POMPEII Registry follows, in which **Giuseppe Gargiulo, Giovanni Esposito and colleagues** assess the pharmacodynamic effects of cangrelor in acute and chronic coronary syndrome patients undergoing PCI. Their data show that cangrelor can be an effective and safe option to rapidly inhibit platelet aggregation and that ticagrelor-pretreated patients with ST-segment elevation myocardial infarction (STEMI) undergoing primary PCI can also be treated with cangrelor. This article is accompanied by an editorial by **Francesco Franchi and Claudio Laudani**.

In the COMPARE STEMI ONE randomised controlled trial, **Valeria Paradies, Pieter C. Smits and colleagues** are evaluating the non-inferiority of an abbreviated DAPT regimen of 1 month followed by prasugrel monotherapy in STEMI patients undergoing PCI. This Trial Design paper presents their investigation currently being conducted at 20 European centres with 1,656 STEMI patients, 50% of whom have multivessel disease (MVD), with a primary endpoint of net adverse clinical events at 3 years. The MVD subgroup will also include a comparison of optical coherence tomography-guided versus angiography-guided complete revascularisation for efficacy and safety endpoints.

This edition is completed by a research correspondence by **Ju Hyeon Kim, Seung-Jung Park and colleagues** in which they compare the clinical efficacy and safety of IVUS-versus OCT-guided PCI in patients with and without acute coronary syndrome. This *post hoc* analysis of the OCTIVUS trial examines the rates of both 2-year target vessel failure and contrast-induced nephropathy. **Juan Manuel Muñoz Bravo, Bruno García del Blanco and colleagues** follow with a flashlight, sharing their experience of obtaining transcaval access through an aorta-outward puncture, assisted by intravascular ultrasound, and, of course, we include the regular column from the EAPCI.

Foundations

So now that we've hinted at what we have in store for you – and just before you explore for yourself what is in this edition – let's take a look at the articles that mark where we've been and the road we've travelled together.

EuroIntervention 20

Your reference journal for coronary, valvular
and structural interventions

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20 for 20: a look back at the key articles* that have shaped EuroIntervention since its launch

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