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IN THIS ISSUE OF ASIAINTERVENTION

Long-term safety and performance of a dedicated stent for very long coronary lesions; thin-strut bioresorbable vascular scaffolds; feasibility and success of distal radial artery access; overcoming vascular access challenges in cardiogenic shock; interesting OCT findings after DEB angioplasty; choice of OCT catheters to minimise vascular trauma; and much more

Upendra Kaul, *Editor-in-Chief*

Dear Colleagues,

I wish all our readers a very happy new year for 2025. This year's first issue is being launched at the 14th India Live in Mumbai on 20 March. India Live is a well-known, premier, annual interventional cardiology course which over the years has become a very influential platform for showing cutting-edge technology and practice in cardiology. This issue also includes selected abstracts which are being presented at the meeting.

This issue starts with an article on a specially designed coronary stent for very long and tapering lesions up to 56 mm in length, the "BioMime Morph" drug-eluting stent, in a series of patients followed up for 3 years by **Deepak Davidson, Ashokkumar Thakkar et al.** The acute and long-term results are good and acceptable with impressive safety data including freedom from target lesion failure in around 99% of patients. The 9-month follow-up angiographic data revealed very low late lumen loss in the stented segment. The main advantage was the avoidance of using multiple stents and the geometry of the diseased vessel was also taken into consideration. The results are impressive but do not take into account either plaque burden or physiology since neither intravascular imaging nor physiology were studied. More metal than necessary can lead to problems of neoatherosclerosis in longer follow-ups, which is challenging and difficult to manage. The study also has an editorial by **Ignacio J. Amat-Santos and Akash Jain** who highlight these issues whilst appreciating the results. They also suggest the use of drug-eluting balloons (DEB) in such situations, thus avoiding the use of metal with its ensuing problems.

Maintaining the vasomotor tone of the vessel after caging it temporarily with a bioresorbable vascular scaffold (BVS) has been a dream of coronary interventionalists. Unfortunately, the experience with the first-generation BVS of 160 µm thickness was not satisfactory, with high thrombosis rates and deployment issues which led to its withdrawal. Consequently, attempts to revive the concept by making these devices with a reduced strut thickness have continued. In this issue, **Puneet K. Verma, Sanjeev Sroa and Paras Koushal** share their experience in a single-centre study with the MeRes100 sirolimus-eluting BVS. With only one deployment failure, the study had a good result up to 1 year of follow-up. This was more of a feasibility study (only 86 patients were included) and requires longer follow-up with continuation of dual antiplatelet therapy. Demonstration of efficacy in terms of the resumption of vasomotor function and long-term safety will be mandatory. Nevertheless, the authors should be congratulated for reviving the concept of BVS: this is only the beginning of a new chapter that has many unanswered, lingering questions.

The transradial approach for coronary angiography is more than 24 years old conceptually, but its use has become widespread since 2010. Thanks to increasing expertise, experience and improved, slender sheaths, the approach is continuously being refined to make it less traumatic to the radial artery by making very distal punctures. **Samantha L. Saunders, Thomas J. Ford et al** from 3 Australian centres report on their experience in a retrospective study of 1,692 patients with first-pass success in 92% of cases. Crossover to proximal-radial or a need for contralateral puncture was infrequent with no vascular complications. Operator experience was the most important factor for success, although patients with hypertension and low BMI also increased the success rate. The study shows that the distal-most portions of the palpable radial artery should be a preferred entry site.

In a situation of poor vascular access associated with cardiogenic shock resulting from acute myocardial infarction, providing haemodynamic support can be a challenge. In an Interventional Flashlight by **Alvin H.Y. Ko, Michael Kang-Yin Lee et al**, the utility of left atrial venoarterial extracorporeal membrane oxygenation is demonstrated to be a life-saving procedure in a moribund patient with cardiogenic shock. This approach could reduce bleeding complications and sometimes overcome challenges in vascular access, as seen in this case.

Next, **Shinichiro Masuda, Takaaki Isshiki et al** present a case of a complex chronic total occlusion (CTO) in a very tortuous circumflex artery in which several microcatheters, including the Corsair Pro and SASUKE, failed to direct the stiff guidewire. Ultimately a 2.7 Fr steerable microcatheter (LEONIS Mova) allowed the tip to selectively bend towards the left circumflex artery and the wire to cross. This demonstrates the utility of innovative technologies in improving the results of CTO percutaneous coronary intervention (PCI).

Rajesh Vijayvergiya, Ankush Gupta et al explain an interesting case of in-stent restenosis treated with PCI using balloon angioplasty. A paclitaxel-eluting balloon was used before completing the procedure. Optical coherence tomography (OCT) imaging before the procedure ended showed multiple tiny, bright particles of drug adhering to the luminal surface of the arterial wall, suggestive of paclitaxel crystals being lodged there. Intravascular imaging can thus be useful at all stages of PCI, from preparing the bed to drug delivery and even at follow-up, showing the effects of DEB intervention in terms of vessel remodelling. These important comments are emphasised by **Sankardas Ajit Mullasari and Vijayakumar Subban** in their accompanying editorial.

Ryoichi Miyazaki, Takashi Ashikaga et al then report on an interesting finding regarding OCT imaging catheters while performing PCI of a calcified left main coronary artery and left anterior descending artery lesion using orbital atherectomy. They found the Dragonfly Opstar to be a safer catheter than the OPTIS, and a Z-shape phenomenon was observed on imaging, leading to a "three circles sign", an adverse marker indicating trauma.

We continue with three articles on percutaneous valve replacements. First, an article by **Carlos Calderas, Kanchan V. Bilgi et al** reporting successful use of the self-expanding Crea Aortic Valve system for transcatheter aortic valve replacement in three patients. Next, the successful use of BASILICA for a valve-in-valve procedure for a degenerated bioprosthetic valve with a challenging coronary ostial position is reported by **Abdul Hakeem, Babar Hasan, and Asad Pathan.** The third article presents a successful tricuspid valve replacement in a case reported by **Katie Wing Sum Fan, Kent Chak-yu So et al** using the Cardiovalve transcatheter tricuspid valve replacement system, whose innovative design is deployed through a special sheath. Percutaneous valve replacements have come of age, and substantial refinements are providing a wide choice to individualise selection of the devices.

The last report of this issue, by **Kalyan Munde, Anagh T. Shetru et al**, describes the very challenging case of a 2-month-old infant with a symptomatic perimembranous ventricular septal defect that was successfully closed percutaneously using an Amplatzer Duct Occluder device with a 2-year follow-up. This seems to be the youngest infant to date who has had such a procedure: a commendable effort.

I do hope you find these articles provocative enough to adopt some of these practices in your work. Your comments and responses would be appreciated.

Happy reading,

Upendra Kaul, Editor-in-Chief

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