

Aggressive lipid lowering post-PCI; excimer laser for treating in-stent restenosis of undilatable stents; intravascular lithotripsy for calcified lesion PCI; robotic angioplasty for complex lesions; pulmonary artery denervation to treat PAH; and more...



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Wishing you all a great year ahead, I realise that this is not only the first issue of 2022 but also the first issue since our journal has been indexed in PubMed. Looking back, I feel proud of the fact that it was during my Editorship that we got this coveted recognition. When I took over, I was very sceptical and nervous about putting my small feet into these big shoes. However, as time has passed, I feel it is doable and we have been quite efficient in handling the journal. In fact, the number of articles we are receiving is steeply increasing, and the quality of the articles is improving. I remember, in the past, we used to get overflows or rejects from EuroIntervention to keep us going. The credit for all of these developments go to the tireless work and efforts of the Rotterdam editorial office, our Deputy and Section Editors as well as the production and copyediting teams.

This issue was planned to coincide with an important annual event, India Live, which started in 2010 in New Delhi, and rotates yearly between New Delhi, Mumbai and Chennai. The objective of this event is to discuss processes that simplify cardiac interventions in complex subsets like left main disease, bifurcation lesions, chronic total occlusions, calcified lesions and graft interventions, and to focus on structural interventions like transcatheter aortic valve replacements, mitral valve interventions and left atrial appendage closures amongst others. Unfortunately, COVID-19 broke this chain and there was no India Live held

in 2021. In view of the continuing pandemic, the 2022 event has been converted to a different format, consisting of monthly events held virtually. The first event is slated for 5th March and will be a session on left main percutaneous coronary intervention (PCI). AsiaIntervention is the official journal of India Live. To keep our commitment, we will release this issue in March this year.

Coming now to the current issue, let us start with an expert review on coronary interventions by Ajit Sankardas Mulasari et al that rethinks the way our ST-elevation myocardial infarction (STEMI) management can be improved to treat the greatest number of patients in low- and middle-income countries. Endorsed by the Cardiological Society of India (CSI) and the Association of Physicians of India (API), the authors discuss the current work of the STEMI-India model, which proposes a 3-model framework based on infrastructure and the workforce availability for nationwide systems of care for STEMI, drawing on the recent and successful experience of the “Tamil Nadu STEMI” project. The authors are aware of the challenges that the COVID-19 pandemic has made to the healthcare system, slowing down any adoption of these suggestions, but still look to changes in legislation and insurance along with international cooperation of different STEMI networks, such as from such professional groups as EuroPCR, to find ways to improve care for all.

Aggressive lipid lowering after PCI and its importance is the next expert review by author Zhen-Vin Lee. There is no doubt that angioplasty is a lifesaving procedure in several types of acute coronary syndrome, but its utility in chronic stable heart disease, even with moderate and severe ischaemia with mild symptoms, has been questioned in the ISCHEMIA trial. This is because it does not reduce the risk of cardiovascular events or death or prevent myocardial infarctions when combined with guideline-endorsed medical treatment.

Angioplasty has also been termed a “patchy treatment” of atherosclerotic coronary disease. Keeping low-density lipoprotein (LDL) cholesterol very low is one of the most important modes to prevent occurrence of obstructions in the vast vascular tree. Of the statins, atorvastatin and rosuvastatin are the current favourites because these, in high doses, can reduce LDLc by up to 50%. The current guidelines, from various societies, from both sides of the Atlantic, recommend very low-level doses in these patients, always less than 70 mgs/dl, but below 50 mgs/dl in very high-risk situations. Also described in this review are other agents, e.g., ezetimibe and PCSK9 inhibitors (evolocumab), which can be used in these situations. Ezetimibe is a rather weak agent, but evolocumab is very potent and can reduce LDLc to very low levels. One of the limitations of evolocumab, besides its high cost, is that it needs to be injected fortnightly for the long term. This has been surpassed by another agent called inclisiran, which acts using short interfering RNA (siRNA) therapy to reduce LDLc levels via an RNA interference (RNAi) and brings the levels down to very low levels. This needs a 6-monthly injection. Inclisiran has proven its efficacy in two large phase 3 trials ORION 10 and ORION 11, and will be available for general use later this year. Another important addition has been bempedoic acid, an oral agent approved by the US FDA and the EU, in 2020, which can also be taken in conjunction with statins, or even on its own, and reduces LDLc substantially. It blocks an enzyme in the liver called adenosine triphosphate-citrate lyase, which is involved in making cholesterol. This agent is already commercially available in several countries.

Let us switch to restenosis after drug-eluting stents (DES). Although this has reduced substantially to single-digit figures, it still is a problem even with 2nd-generation DES. The mechanisms are different and include underexpansion, neointimal hyperplasia and stent fracture. In this issue, Adikari et al used excimer laser treatment in a group of patients with diffuse in-stent restenosis due to underexpanded stents, resistant to a 26 atmosphere high-pressure dilatation due to calcification and an unyielding vessel wall. Success

was reported in all 31 lesions treated, after the procedure, and with acceptable results at 6-month follow-up. Thus, this single-centre study shows how intravascular excimer laser treatment can be used as a niche indication to treat these very difficult-to-treat patients.

Our next article on coronary interventions sees authors Ata Doost et al explore the early Australian experience with using an intravascular lithotripsy device as a treatment modality when faced with calcified coronary stenoses. In this single-centre study, the authors show intravascular lithotripsy to be a safe and effective approach in modifying coronary calcium, enabling optimal stent expansion, and avoiding the need for more complex lesion preparation strategies. They note, as well, that the use of the intravascular lithotripsy device with other adjunctive therapies can be a viable option for calcific lesions that could not be crossed/dilated by balloon, pointing to a new protocol in the treatment of severely calcified coronary lesions in acute and chronic coronary syndromes.

We come now to the modern technology for coronary interventions, which has seen the entry of robotics into the armamentarium. Robotics has the advantages of precision, reliability, and avoidance of radiation exposure. In this issue, Khokhar et al offer an interventional flashlight showing how advancements in this technology can be extended to complex lesion subsets.

Turning to interventions for valvular disease and heart failure, Yusuke Watanabe et al report on an innovative approach to achieve haemostasis when antegrade femoral puncture is employed. The authors present the Modified Angio-seal Haemostasis, or MAOH, technique using the Angio-Seal device, and show that this modified interventional method of antegrade common femoral artery access closure is highly feasible with an increased degree of efficacy.

In another article, Hang Zhang et al have reported their experience from a multicentric Chinese registry with pulmonary artery denervation in 120 patients with pulmonary arterial hypertension. They observed an improvement in long-term survival, which was the primary endpoint, especially in patients with Functional Classes 3 and 4, and also functional improvement, as assessed by an improved 6-minute walking test.

In an interesting flashlight article, Bafna et al have reported a case of Poland syndrome and dextrocardia with secundum atrial septal defect, where an Amplatzer device was used successfully to close the defect.

It is now for you to read more details in this issue of AsiaIntervention. Feedback from our readers would be very much appreciated.