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AsiaPCR/SingLive: in its third year and growing

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January 2012 marks the third year of the annual AsiaPCR meeting. It attracted more than 1,800 attendees who gathered in Singapore for the premier interventional meeting in the Asia-Pacific region. There were more than 200 experts from around the world including Europe, USA, Japan, China, India, and Singapore. A total of 14 hours of live transmission from four countries (Singapore, India, China and Indonesia) supplemented 79 sessions covering a diverse array of topics in interventional cardiology.

In this article, we present some highlights of AsiaPCR 2012.

Perspectives on percutaneous coronary interventions in the Asia-Pacific region in 2012 and beyond

The countries of the Asia-Pacific region are culturally and economically heterogeneous with widely different percutaneous coronary intervention (PCI) practice patterns. Focus sessions highlighted these differences, with invited speakers from both Europe and the Asia-Pacific region giving their perspectives, aided by live case demonstrations.

Complex left main (LM) stem disease: PCI versus CABG

Run-Lin Gao of China showed a rapidly increasing number of unprotected LM interventions being performed in China, citing strong cultural reluctance for coronary artery bypass surgery (CABG). In 2004-2010, LM PCI comprised 37.5% whereas LM CABG was only 4.9%. The results from Fu Wai hospital showed very high rates of procedural success, as well as low rates of major adverse cardiac events (MACE) at 30 days. He went on to say that the SYNTAX score was a useful tool for evaluating the risk of unprotected LM stenting, but also thought that it might be improved by combining it with clinical factors to develop more powerful clinical management algorithms. He painted an overall favourable and optimistic picture of unprotected LM PCI.

Upendra Kaul of India presented a contrasting perspective. He said that procedures in India have to be durable because of societal reasons such as the lack of social security. Repeat procedures were a problem; oftentimes patients did not get much follow-up and LM restenosis was not forgiving. Unlike China, he noted that surgical treatments were well accepted by Indian patients who did not have any particular religious or cultural beliefs against surgery. Currently, he felt that the evidence was insufficient to show that PCI with drug-eluting stents (DES) is equivalent to CABG for most types of LM disease.

From the European perspective, Marie-Claude Morice from France showed data from the SYNTAX run-in phase, noting that in Europe unprotected LM PCI was much more frequently performed than in North America (although less frequently than in China). In her institution, they are never done *ad hoc*, and are performed via the radial approach under intravascular ultrasound control. Together with appropriate patient selection, results have been excellent.

PCI in high-risk ACS

Speakers from Australia, India and France presented a detailed overview of practices in their individual countries, with contributions from the international panel. It was clear that amongst the

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affluent Asia-Pacific countries, treatment of high-risk ACS adhered closely to European and North American guidelines, with a strong preference for primary PCI for STEMI and early invasive therapies for NSTEMI. There was a widespread availability of clopidogrel and prasugrel, sometimes as generic formulations, but limited availability of ticagrelor. DES usage patterns varied widely, but were generally very high, especially in China and India.

Dr. Kaul, presenting the perspective from Delhi, India, clearly highlighted these variations. Delhi has a population of 16,753,265. At the Fortis Escorts Heart Institute, New Delhi, there are five cardiac catheterisation labs providing round-the-clock PCI access. More than 4,000 PCIs were performed last year by 20 senior interventional cardiologists. Of these, 200 were primary PCIs, and 450 PCIs were performed after thrombolysis.

Care for both STEMI and NSTEMI patients approximated Western norms in most ways. For example, in STEMI, patients received pre-hospital aspirin, unfractionated heparin and 60 mg prasugrel unless there was a high bleeding risk. Thrombo-aspiration for primary PCI was used by most operators. There was high usage of Glycoprotein IIb/IIIa inhibitors during primary PCI.

However, delayed presentation after STEMI was very common. Presentation within four to six hours occurred in less than 50% of cases. Despite this, door-to-balloon time in most instances was acceptable. The reasons cited for the poor transfer times after onset of chest pain included lack of awareness, non-availability of organised ambulances as well as bad traffic conditions.

For NSTEMI, patients were admitted directly to intensive care, with initial treatment composed of aspirin, 600 mg clopidogrel and fondaparinux. Timing of invasive strategy depended on risk stratification, but was generally within 12 to 48 hours. During PCI, additional UFH was given with selective usage of Glycoprotein IIb/IIIa. Prasugrel was used in high-risk cases.

For both STEMI and NSTEMI, DES usage was very high, approaching 100%. He said this was because patients with high-risk for restenosis predominated. Diabetics, for example, comprised >40%, and patients generally had small vessels and long lesions. Notably, several lower cost indigenous DES were available.

Nevertheless, access to interventional therapies still remained low in India. Dr. U. Kaul went on to say that <15% of the population in Delhi had health insurance of some kind (compared with 3%-4% for the rest of the country). Many patients would be admitted to non-PCI capable hospitals. In such hospitals, pharmaco-invasive therapies had become well accepted. The default fibrinolytic agent was streptokinase, although locally manufactured tenecteplase has seen increased usage in recent years.

Late breaking clinical trials

INDICOR

The INDICOR study assessed the safety, feasibility and efficacy of using drug-eluting balloon (DEB) and bare metal stents (BMS) in combination with two sequences (balloon first or stent first) in real-world patients. The aim was to evaluate late loss at six months between balloon first and stent first strategies.

Seven centres in India participated in this controlled prospective multicentre randomised 2-arm trial. Ninety-seven patients were enrolled. Treatment 1 was: cobalt chromium stent deployment followed by paclitaxel-coated PTCA balloon dilatation. Treatment 2 was: paclitaxel-coated PTCA balloon dilatation followed by stent deployment. Dual antiplatelet therapy was for a minimum of three months. The primary endpoint was late lumen loss at six months. Secondary endpoints were clinical follow-up (MACE) at six months, one and three years. The main inclusion criteria were unstable angina with documented ischaemia or documented silent ischaemia and eligibility for coronary revascularisation by PCI, reference diameter 2.5-4.0 mm, lesion length 10-25 mm, at least 70% stenosis or at least 50% stenosis with ischaemia, and coverage of the target lesion planned with one DEB. In INDICOR it was seen that the in-stent late loss was 0.50 mm and 0.49 mm respectively in the balloon-first and the stent-first groups (p=NS). One-year MACE rates were 16.3% and 8.3% respectively (p=0.36).

INDICOR concluded that the combination of DEB and BMS was feasible, regardless of the sequence of DEB use. The sequence of stenting and usage of DEB did not show any statistical differences with respect to in-segment or in-stent late lumen loss or MACE. BMS can be used as a bailout for DEB induced suboptimal angioplasty with late loss identical to polymer based PES.

BASE-ACS TRIAL, 18-MONTH FOLLOW-UP

This was a randomised comparison of the TITAN-2 bioactive stent versus XIENCE-V everolimus eluting stent in acute coronary syndromes patients. The 12-month results of BASE-ACS had already been presented at EuroPCR 2011, showing fewer MIs and stent thrombosis with TITAN-2 initially, as well as a different time pattern profile for development of restenosis.

During AsiaPCR 2012, the 18-month follow-up was presented, showing TITAN-2 was associated with a comparable frequency of target lesion revascularisation in patients presenting with acute coronary syndromes to those of patients with XIENCE-V stent implantation. However, the rates of MI and stent thrombosis still tended to be higher in the DES group (as it was at 12 months).

Overall, BASE-ACS suggests that a stent coated with titanium nitride oxide represents a safe and effective alternative to the XIENCE-V in acute coronary syndromes patients.

NON-CORONARY TRANSCATHETER INTERVENTIONS

Global interest in non-coronary transcatheter interventions is surging, and this was reflected at AsiaPCR. Patrick W. Serruys shared his vision in this area. He grouped such interventions into four main areas: (1) structural heart disease interventions, (2) hypertension, (3) heart failure devices and (4) other novel modalities. He said these therapies would be additive to current catheterisation laboratory procedures. As they crossed subspecialty territorial boundaries, he emphasised they would require new training and educational initiatives to be established.

AsiaPCR 2012 included sessions on transcatheter aortic valve implantation (TAVI), transcatheter mitral valve interventions such

as Mitraclip, percutaneous paravalvular leak closure, left atrial appendage closure, atrial septal defect and patent foramen ovale closure as well as renal artery denervation (RDN). Asia-Pacific specific issues such as the penetration of hybrid operating theatres, the relatively small size of many patients compared to Caucasians, cultural aversions to open heart surgery, weaknesses of existing methods of estimating surgical risk, cost and reimbursement were discussed.

Live case transmissions of TAVI and RDN from the National Heart Centre in Singapore were also broadcast to attendees, focusing on the practical aspects and pitfalls of each.

Participants from Malaysia, Singapore, Australia and New Zealand, the UK and Europe shared their TAVI experiences. The largest Asia Pacific experience was from Australia. Australian patients were included in the TAVI programme either through clinical trials or a special access scheme. Ian Meredith (Australia) highlighted the impressive results of the ANZ CoreValve study which showed a 30-day cardiovascular mortality of 3% and all-cause mortality of 4%. At 12 months, freedom from cardiac death was 94±2% for cardiac death and 90±2% for all-cause death. There were no cases of valve migrations, frame fractures or structural valve deterioration reported.

Conclusion

AsiaPCR remains the premier interventional cardiology meeting in the Asia-Pacific. In addition to common challenges such as chronic total occlusions, complex LM and complex bifurcation lesion PCI, there are now many new sessions on non-coronary transcatheter interventions, more late breaking trials as well as expansion of educational sessions to nurses and paramedical colleagues. With each year, AsiaPCR has grown from strength to strength. We look ahead to another exciting year at AsiaPCR 2013.