Innovation in DES Room Giotto Thursday 14 January **12:45–14:15**

Looking into the future of DES

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behind material in a similar way as to the first generation stents.

During the session, co-chair Sigmund Silber (Heart Centre at the Isar, Munich, Germany) will give a presentation that expands on the concept of inflammatory stent response, focussing specifically on bioabsorbable platforms and another notion, biomimicry, pertaining to a concept in which stents are designed to mimic natural, organic material as close as possible, minimising inflammatory response. "What companies are trying is to do make the foreign body component as small as possible, so the coronary does not reject the stent," said Professor Silber.

"The smaller the stent struts the better, but you need still good stability within the stent. Of course, anybody can make thin stent struts, but the trick is to have extremely thin stent struts while still providing a robust scaffold."

Offering an example, Professor Silber described the BioMime and Mitsu DES (Meril Lifesciences, India), which features dramatically reduced strut thickness and coating thickness when compared to earlier other DES (Figure 1, page 13). Alongside its lower profile, the BioMime adopts the bioabsorbable polymer design, leaving only non-polymeric components behind.

Sigmund Silber

In addition, Mitsu, the next generation stent in the family now under development, will feature a new sirolimus drug analogue, merilimus, which can be delivered at lower doses, incorporated in a proprietary polymer-free formulation.

While it is clear that smaller strut sizes and

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bioabsorbable characteristics show great promise for improving biomimicry, and thus reducing inflammation, Professor Silber stressed that there is still a great need for a serious assessment of our current post-stenting management if we are to fully take advantage of the new technology, particularly with respect to dual antiplatelet therapy.

"The Americans recommend at least one year of dual antiplatelet therapy in their guidelines," he said. "The European guidelines from 2005 have recommended it for at least six months, and we repeated the same recommendation in the 2010 guidelines. So there is discrepancy between Europe and the United States."

Professor Silber continued: "We really do not have sound data as to what is the minimum required dual antiplatelet therapy. And for me, the key question is not bioabsorbable polymers yes or no, or even thinner stent struts yes or no, to me it is which stent can be applied safely with a much shorter duration of dual antiplatelet therapy. The bleeding risk is there, and the compliance problem is there, and unfortunately we don't have a randomised trials that show data of one year versus six months, or one month versus six months of dual antiplatelet therapy, especially with the newer P2Y12 inhibitors."

Crucially, Professor Silber noted that large trials testing bioabsorbable DES have used the technology in conjunction with dual antiplatelet therapy for 12 months of more, somewhat negating their inherent benefits: "What sense does it make to use a bioabsorbable polymer and then give the dual antiplatelet therapy for a whole year? If you really trust your concept you have to prove it," he added.

Looking back to the present, Professor Silber underlined that, for now, the gold standard in drug-eluting stenting still lies in durable polymer platforms. In particular, he referred to the Resolute DES (Medtronic), which will form the focus of another presentation he will give in the JIM session.

In a dedicated randomised all-comers trial, the zotarolimus-eluting Resolute DES was proven to be just as safe and effective as another leading device, the everolimus-eluting Xience V (Abbott Vascular)/Promus (Boston Scientific) DES, in treating patients with complex lesions. "We have seen in this randomised RESOLUTE trial that they both perform equally, even after three years, so both stents I would say are equivocal," said Professor Silber.

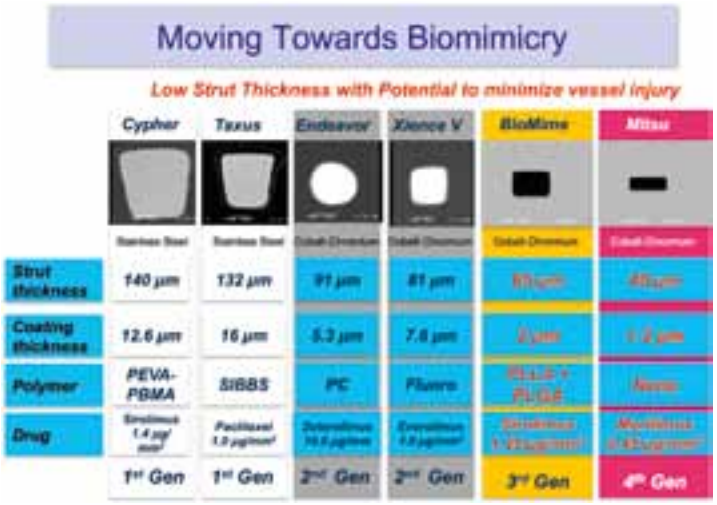

Figure 1: Moving towards biomimicry

The RESOLUTE pooled global program has combined this randomised trial with a further four registry studies to evaluate the use of the Resolute device in more than 5000 patients, with a particular focus on the outcomes in diabetes subgroups. All of the patients had the same inclusion and exclusion criteria.

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Data from this pooled registry (Figures 2 and 3) clearly demonstrate similar results for patients without diabetes and those with non insulin-dependent diabetes in terms of target lesion revascularisation rate and cardiac death/target vessel myocardial infarction (TVMI). "This is a very important finding because diabetes is a risk factor for major events, and with the Resolute stent, diabetics that are not on insulin do the same as non diabetics," said Professor Silber.

He added: "Diabetic patients on insulin have still about a double MACE [major adverse cardiac event] rate, so bypass surgery should also be considered as an alternative."

In his closing remarks to *JIM Today*, Professor Tamburino added his thoughts on another intriguing topic planned for the session, that of dual therapy stenting with endothelial cell capturing. He said: "This is a very interesting solution for some subsets of patients because the rapid endothelialisation allows us to give therapy for a short while which is important for patients who are drug resistant or those who have intolerance, or patients who need to undergo surgery, as well as elderly patients.

"What I would like to know is what is the late loss in these types of stents, because we attracted the cells but we could induce restenosis. So I am waiting to see results that establish, in a stable way, that there is late loss that at acceptable levels."

Professor Silber and Professor Tamburino will co-chair the session 'Innovation in DES' at 12:45–14:15 this afternoon in Room Giotto. During the session, Professor Silber will deliver two presentations that will delve deeper into the Resolute stent platform and biomimicry in DES, respectively.

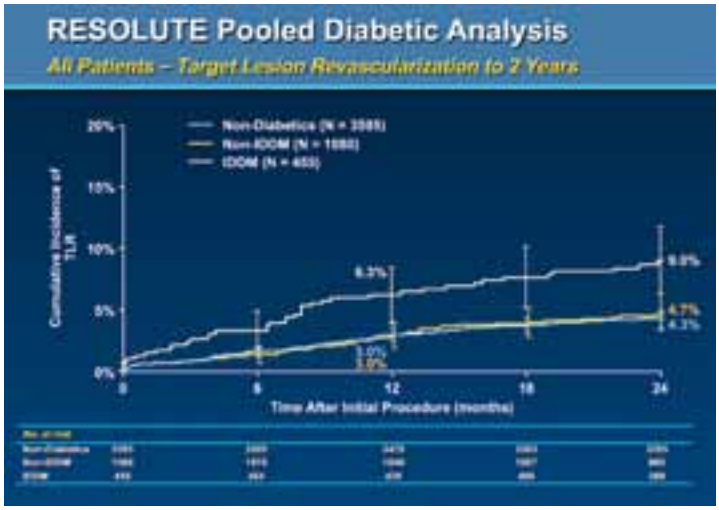

Figure 2

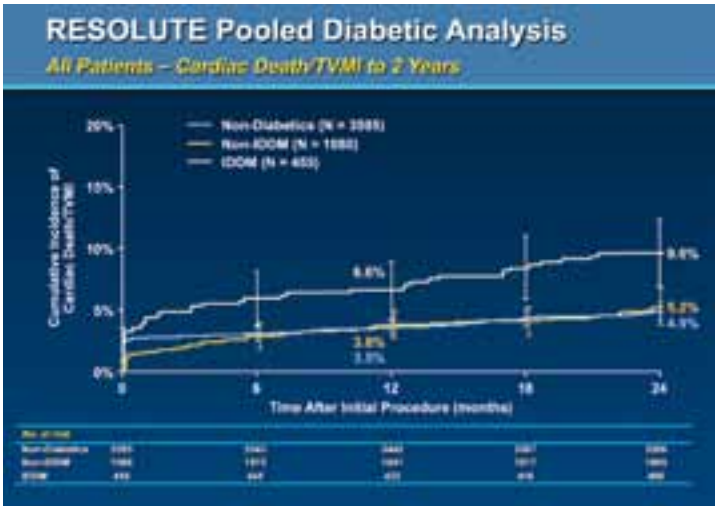

Figure 3

A warm welcome at the Wine Corner

There are many aspects of JIM that make it stand out from other interventional meetings – the strong emphasis on didactic live demonstrations of the latest techniques and devices in complex coronary cases, the deserved reputation for knowledge-sharing in an engaging and open manner through state-of-the-art symposia, the opportunity to visit and enjoy the Eternal City. But one aspect is perhaps more unusual, given the stature of the meeting.

The Wine Corner, by Cascina Pastori, is a unique and fascinating venture in which JIM Course Director Antonio Colombo (Columbus Hospital Heart Center and St Raffaele Scientific Institute, Milan) has transformed his passion for wine into an ambitious project to produce a range of high quality, characterful wines from grapes grown in harmony with their surroundings.

The initial steps were taken in 2004, when Dr Colombo acquired nine hectares of vineyards in Bubbio, a small town in the heart of Asti Langa that was well-known for wine production even in Roman times. The new wine cellar was inaugurated in 2006, but it was only in 2012, after a chance encounter between Dr Colombo and winemaker Riccardo Cotarella, that the enterprise, which is now run by Dr Colombo's son Andrea, entered a whole new phase.

For Riccardo Cotarella, the key factor was the presence of five hectares of Pinot Noir. "The presence of such an intriguing varietal as Pinot Noir" he explains, "was fundamental to the decision to join Doctor Colombo's project."

He continues: "I turned down many wineries that had proposed working with Pinot Noir, convinced of having found here, even with a bit of healthy presumption, determining factors. As a result, we worked in full harmony with the winery to give a specific identity to the varietal that represents the Bubbio terroir and better still, that of Cascina Pastori. We have all the prerequisites to make this winery into a true a gem of the Piedmont."

The result is a series of wines that express the identity of the area: the Pinot Noir "Apertura", and its sparkling version "Alta Langa Rosè Riserva"; the Chardonnay "Silviandre", the Moscato d'Asti "Pastù", and the Moscato Passito "Pastù Tardì".

To find out more about the wines from Cascina Pastori, and how to order them, please visit the Wine Corner, in Exhibition Area 2.