

The management of ACS: interview with Irene Lang

What are the current challenges for those interventional cardiologists who treat patients with ACS?

In my institution the main patient-related challenges are old age, complex lesions and risk of bleeding. Shock can also be a challenging presentation, but I don't think that there is any doubt that patients in shock due to AMI should go to the catheter lab immediately. Interventional challenges include initial thrombolysis and the timing of angiography and PCI after thrombolysis. Another dilemma, of course, is the most appropriate antiplatelet therapy and treatment paradigm. How do we block platelet activation and how do we identify responders versus non-responders to antiplatelet therapy?

Were there any specific talks or seminars at TCT or ESC this year that directly address some of these challenges? Were there other key data presented for patients with ACS?

I think the NORDISTEMI data will help us address some of these challenges, in particular regarding the timing of PCI after thrombolysis. The study found that STEMI patients who live in remote areas and receive initial thrombolysis have better outcomes with an early invasive strategy involving immediate hospital transfer for angiography and PCI compared with a conservative, ischaemia-guided strategy.

Reports from the ATLAS-TIMI 42, APPRAISE-2 and SEPIA studies provided some interesting new data on the role of factor Xa inhibitors, rivaroxaban, apixaban and otamixaban, respectively, as adjunctive therapies in patients with recent ACS. I think that there is

some further research needed on targeted anticoagulation in ACS to help reduce the risk for bleeding. In addition, I think there have been some important new steps in atrial fibrillation shown in the RE-LY trial; although it hasn't translated into ACS yet, we can expect this soon. In the future, there will be treatments more efficacious than fondaparinux but not as aggressive as the GP IIb/IIIa inhibitors.

What do you think of the current treatment options and strategies to reduce bleeding in STEMI patients and how can they be improved?

The very obvious strategy would be to use bivalirudin and there has been some strong data supporting its use from the HORIZONS trial. I think, at the cost of some early thrombus, we need to move into the mode of assessing the inherent risk. We need some bleeding risk scores to better characterise this very difficult clinical disorder. Further, there should be two scores; a bleeding score and an ischaemic-risk score to allow us to assess the right course of action for each individual situation. The use of bivalirudin should be encouraged if the bleeding risk score exceeds what we can tolerate.

At TCT this year, one of the interventional/surgery questions raised was "Should left main PCI be a class IIa indication?". What are your thoughts?

In the 2005 guidelines, PCI of unprotected left main stenosis was included as a IIb C indication. I think based on the advances within the past 4 years we are getting closer to having a class IIa indication for left main PCI, but we are not quite there yet – it needs to be restricted to very well defined, or otherwise low-risk, cases.



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KEY

ACS, acute coronary syndrome; AMI, acute myocardial infarction; ESC, European Society of Cardiology; GP, glycoprotein; IVUS, intravascular ultrasound; MACE, major adverse cardiac event; NSTEMI, non-ST segment myocardial infarction; OCT, optical coherence tomography; PCI, percutaneous coronary intervention; STEMI, ST segment elevation; TCT, Transcatheter Cardiovascular Therapeutics

How would you describe the evolution of antiplatelet therapy in the management of ACS?

I have seen antiplatelet therapy change dramatically; initially the importance of platelets when you implant the stent was not very clear and we used to put patients on warfarin and aspirin after stent implantation. Now we know that it is not coagulation factors but platelet activation and platelet receptors that play a critical role in MACE; therefore, you need dual inhibition. I think that the use of GP IIb/IIIa inhibitors will be overtaken by potent platelet inhibitors, and treatment will be chosen based on individual bleeding risk and the individual stenting anatomy (i.e. the location, placement, angulation and assembly of stents, and their impact on the final vascular anatomy). Pharmacogenetics will also be important in allowing us to characterise patients and individualise treatment strategies.

How did the data from TRITON-TIMI 38 impact your personal clinical determination of antiplatelet therapy when it came to the treatment of a patient with UA/NSTEMI, STEMI and stent thrombosis?

TRITON-TIMI 38 has raised awareness of the importance of antiplatelet treatment in high-risk situations. Stent thrombosis is a catastrophe; I think platelet inhibition and thrombosis is not an issue here, because you cannot address stent thrombosis by inhibiting platelets – it is too late. With regard to NSTEMI and STEMI, TRITON-TIMI 38 has shown clearly that more potent platelet inhibition in these situations does reduce the risk of cardiac events, but that effect needs to be balanced against the

increased risk for bleeding. In STEMI this increased bleeding risk disappears, as the ischaemic risk is much greater.

How important is a multidisciplinary approach to managing ACS?

It is very important, it involves emergency care, nurses, coronary surgeons and technical personnel and, increasingly, it requires a new group of people who manage the IVUS and OCT. I think that IVUS has a place in ACS treatment and without the technician we cannot use it.

How would you like to see the guidelines improved to help those who manage patients with ACS?

Thrombectomy is included in current guidelines for STEMI patients. I suspect it will eventually be incorporated into guidelines for NSTEMI as well. We need to remember that while we might get more complicated and polymorbid ACS cases in our units in Austria today compared with 5 years ago, our colleagues in Eastern Europe still see many 'classical cases' in which thrombectomy would be ideal. That said, if thrombectomy is not in the guidelines then that is a barrier to its use, as health resources will not be allocated for its use. Nevertheless, this change has to be based on solid data on thrombectomy catheters and further research in this area is needed.

Finally, a key concept is to individualise patient care and management in ACS. Guidelines should focus more on individual risk; there can't be one indication for everyone. After all, we treat the 96-year-old who comes with an occluded right coronary artery very differently from a healthy 40-year-old patient. I think this will, ultimately, improve the standard of care for the patient.

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