PCI offers positive outcomes in stable angina

Groundbreaking trial results released at EuroPCR yesterday demonstrate a role for percutaneous coronary intervention (PCI) in the treatment of stable angina. Although PCI has become a well-established therapy for acute coronary syndrome (ACS), until recently there was little evidence to support a role in patients presenting with chronic coronary syndromes (CCS).

But significant data from trials that use the latest imaging technology and devices, and which follow patients over the long term, have established that PCI can achieve satisfactory, predictable outcomes. These re-address the role of PCI in CCS (for lesions in stable coronary artery disease, or for non-culprit lesions in stabilised ACS), backing the less invasive strategy as a viable option.

PCR yesterday released a statement endorsing the findings, and say that increasing evidence now supports a CCS treatment strategy using PCI with newer-generation DES.

Michael Haude said: “Until now, the prognostic role of PCI in patients with chronic coronary syndromes has been unclear, which has led to questions about its efficacy. Modern drug-eluting stent technology and better identification of ischaemia-driving lesions has helped to improve results. Important new data released during EuroPCR 2018 now strongly support the positive role of PCI in the treatment of chronic coronary syndromes.”

Findings from the ORBITA trial were simultaneously presented at EuroPCR yesterday and published in Circulation. They indicate that PCI improves ischaemia and renders more patients free of angina than does placebo.

ORBITA is a double-blind, randomised controlled trial on PCI in stable angina to determine the impact of coronary angioplasty on symptoms and blood supply to the heart. The physiology-stratified analysis used fractional flow reserve (FFR) and instantaneous wave-free ratio (iFR) as predictors of the placebo-controlled response to PCI.

The primary endpoint was difference in exercise time increment between the groups. FFR and iFR are shown to predict the strength of the PCI effect on ischaemia, but this is only clearly seen on blinded stress echo evaluation and is not visible in symptom scores or exercise times.

M. Haude said that the results would be used to inform European Society of Cardiology recommendations: “When we talk about the new guidelines on chronic coronary syndrome which are going to be delivered next year probably, maybe the year after, they will clearly find their way into these guidelines.”

Other highlights from the trials on stable angina were the outcomes from GZ-FFR, and a pooled analysis from FAME 2, DANAMI-3-PRIMULTI, and COMPARE-ACUTE, as well as results from the SCAAR registry.

GZ-FFR is a randomised controlled trial of PCI versus optimal medical therapy in patients with stable angina and grey-zone fractional flow reserve values. It has been suggested that medical therapy alone provides good clinical outcomes in patients with grey-zone FFR, and that stenting all lesions with grey-zone FFR, as currently recommended, may represent overtreatment.

The trial found that, at two months, percutaneous coronary revascularisation signals a significant reduction in angina frequency and improvement of quality of life, the first study to demonstrate in a prospective
randomised trial that there is benefit in terms of symptoms in treating these patients.

Improvements exceeded that seen in ORBITA, although when presenting the findings Barry Hennigan said this needed to be interpreted with caution, because of the lack of patient blinding. “We must bear in mind that our PCI group knew that they had received PCI.”

EuroPCR 2018 also saw results from the first patient-level, pooled analysis of all existing trials – FAME 2, DANAMI-3-PRIMULTI, and COMPARE-ACUTE – evaluating FFR-guided PCI with contemporary stents versus medical therapy alone to reduce cardiac death and myocardial infarction. The results demonstrate improved hard outcomes. In patients with stable coronary lesions, PCI guided by FFR reduces the risk of future myocardial infarction or cardiac death independently of its impact on symptoms. “These findings imply that properly selected patients have a prognostic benefit from PCI independent of its impact on symptoms,” concluded investigator Frederik Zimmerman. A report from Swedish Coronary Angiography and Angioplasty Registry (SCAAR) examined long-term survival in patients with stable angina pectoris undergoing PCI with or without intracoronary pressure wire guidance. SCAAR is a national registry of coronary angiography and PCI data from 29 Swedish hospitals. Many stent trials have used the registry as the basis of their investigations, and it has been seen as a longtime barometer of the safety and efficacy of drug-eluting stents.

This historic, large observational study looked at patients with CCS who underwent PCI – 5,460 patients with FFR/iFR guidance and 21,221 without. At 10 years, a significant reduction of overall mortality, restenosis, and stent thrombosis was observed in the FFR/iFR-guided PCI group.

Michael Haude hailed the combined findings from the trials as a demonstration that “PCI with latest-generation DES is an effective strategy for the treatment of CCS in 2018, both in terms of symptom relief ... and in terms of hard outcomes. Together, these data point to the clear recognition of the usefulness of physiological guidance for stenting, which, in the case of CCS, does have an impact on outcomes during longer-term follow-up. Physiological guidance has proven itself to be an important asset in planning the intervention, and a tool for predicting outcomes.”

EuroPCR 2018 turns the spotlight on to the combined effects of drugs and devices with the introduction of a new series at the congress, Focus on Drugs and Devices Synergy. Its aim is to help you to understand and deliver the best pharmacological care for patients treated with devices.

Pharmacology is constantly evolving. There is now a bewildering array of choice in drug selection, combination, timing of initiation, dosing, and duration. But, not all of these combinations can be tested, guidelines cannot address their diversity, and evidence is often unavailable, partial, or very complex and confusing. Clinicians are frequently left to rely on their own best clinical judgment.

In response, noted specialist Ph. Gabriel Steg initiated the programme, which firstly determined the most burning clinical issues on the interface between drugs and devices, and then identified experts ready to tackle each scenario.

Four separate case-based educational sessions at EuroPCR will see a leading interventionalist address a different dilemma in the field of drug-device interactions. Each will involve an interactive presentation of clinical situations, giving rise to a highly practical and brief PCI clinical algorithm, delivered and endorsed as the personal view of the expert. It will not be a guideline, the view of any official body – including PCR – or sponsored by industry.

The major principles for the PCR clinical algorithms are that they are clinical – that is, a suggested solution to a common clinical scenario, and not just an evidence review – and practical, as well as case- and individual-based. The algorithms are developed from clinical cases and field tested, and delivered and endorsed by individual experts, not by societies or official organisations, so that they represent an expert’s view on how to address a specific clinical problem, as of today.

In the first of the four sessions, on Wednesday 23 May, ‘What is the optimal duration of DAPT post-stenting?’, Marco Valgimigli provided a practical algorithm to decide upon dual antiplatelet therapy (DAPT) duration after coronary stenting through a case-based discussion on the evidence, and by giving examples on the use of available scores to gauge duration.

P.G. Steg facilitates at all four case-based meetings, he says: “The impact of prolonging or stopping DAPT can be important, because it can lead to bleeding or a myocardial infarction (MI) or stent thrombosis. This session will show you how to assess and balance the risks of bleeding versus the risks of thrombosis.”

The second dilemma to be assessed is ‘What is the optimal antithrombotic cocktail after TAVI?’ on Thursday 24 May. In this session, Pascal Vranckx will help you to understand the pathophysiology of bleeding and clotting following transcatheter aortic valve implantation (TAVI), and the potential complexities involved with anticoagulation in a highly vulnerable patient population. This will lead to the development of a comprehensive antithrombotic treatment algorithm for patients who have undergone TAVI.

Robert Byrne tackles the thorny issue of ‘How to handle switching between antiplatelet agents?’, at which Thomas Cuisset will outline basic pharmacological concepts to better understand potential drug–drug interactions associated with switching antiplatelet agents, as well as providing definitions on switching, and giving practical recommendations on modalities of switching antiplatelet agents.

The information delivered during the sessions will be timely and up-to-date, with constant reference to guidelines to address the unmet educational needs of the interventional community. The sessions will develop practical solutions to the frequent clinical problems related to drug-device interactions (DDI). Two facilitators will be present at each session, encouraging interactivity and making the sessions dynamic and engaging.

In other sessions in the Focus on Drugs and Devices Synergy, a series of abstract-based meetings will look at the predictors and therapy of long-term thromboembolic events with TAVI, novel strategies to reduce infarct size and improve outcomes in ST-segment elevation myocardial infarction (STEMI), vessel healing and DAPT in drug-eluting stents, and the management of acute coronary syndrome with stents and antiplatelets.