Apixaban for AF outperforms warfarin in stroke prevention

By Janet Fricker
ESC Congress News

Apixaban is superior to warfarin in the prevention of stroke and systemic embolism in patients with atrial fibrillation, according to the ARISTOTLE study presented yesterday in a Hot Line session. The study, published simultaneously in the New England Journal of Medicine, additionally showed that apixaban was associated with less bleeding and lower mortality rates.

Study presenter Professor Christopher Granger, said: “With a 21% reduction in total stroke and 31% reduction in bleeding, the ARISTOTLE trial has really hit the sweet spot in terms of dose.”

In an accompanying editorial in the NEJM, Jessica Mega from Harvard Medical School, Boston, USA, wrote: “Apixaban is the first of the newer anticoagulants to show a significant reduction in the risk of death from any cause as compared with warfarin.”

While warfarin and other vitamin K antagonists are effective in preventing stroke in patients with AF (reducing the risk by two-thirds), use has been limited by a narrow therapeutic range, drug and food interactions and risk of bleeding.

“There’s an enormous unmet need in the treatment of patients at risk of stroke associated with AF; only about half those who should be treated are treated,” said Granger.

Currently three alternatives to warfarin are now in development - apixaban (a direct oral factor Xa inhibitor), dabigatran (a direct thrombin inhibitor) and rivaroxaban (a factor Xa inhibitor). The AVERROES study, reported at last year’s ESC Congress, showed that patients with AF unable to take warfarin and treated with apixaban had a significantly lower risk of stroke and systemic embolic events than those treated with aspirin.

“The fact that both AVERROES and ARISTOTLE give similar messages provides us with real confidence in the efficacy of apixaban,” said Granger, from Duke Clinical Research Institute, North Carolina, USA. “It’s particularly striking that the ARISTOTE study, which was designed to show non-inferiority to warfarin, actually showed superiority.”

In the Apixaban for Reduction in Stroke and Other Thromboembolic Events in Atrial Fibrillation (ARISTOTLE) study, published simultaneously in The Lancet, found that in low-income countries 80.2% of patients with previous CVD received no preventive medication at all. Even in high-income countries 11.2% did not receive treatment.

Yusuf said: “These are inexpensive, widely available drugs, and for 80% of the world to get not even one of them is a global tragedy.”

The PURE study was set up in 2003 in 17 countries, and enrolled 154,000 adults aged between 35 and 70; 5650 had had a self–reported CHD event, and 2292 a stroke. The results showed that few of them took antiplatelet drugs (25.3%), beta blockers (17.4%), ACE inhibitors or ARBs (19.5%), or statins (14.6%). Predictably, drug use was highest in high-income countries and lowest in low-income countries.

Salim Yusuf: “We need systems in place to deal with this.”

Underuse of proven secondary prevention drugs a ‘global tragedy’

By Helen Saul
ESC Congress News

The underuse of cheap and proven drugs for the secondary prevention of cardiovascular disease is a “global tragedy”, said Dr Salim Yusuf from McMaster University, Canada, presenting results from the Prospective Urban Rural Epidemiological (PURE) study yesterday.

The study, which was published simultaneously in The Lancet, found that in low-income countries 80.2% of patients with previous CVD received no preventive medication at all. Even in high-income countries 11.2% did not receive treatment.

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Colchicine effective for repeat symptom relief in pericarditis

**Trial, 18,201 patients with AF and at least one additional risk factor for stroke were randomised to apixaban (n = 9120) at a dose of 5 mg twice daily or to warfarin (n = 9081) with a target international normalised ratio INR 2.0 to 3.0 for prevention of stroke or systemic embolism. Patients were recruited from 1034 clinical sites in 39 countries.**

Results at a median duration of follow-up of 1.8 years showed primary outcome (ischaemic or haemorrhagic stroke or systemic embolism) in 1.27 % of patients in the apixaban group and 1.66% in the warfarin group (HR 0.79; 95% CI 0.66-0.95; P = 0.001 for non-inferiority). The rate of death from any cause was 3.52% in the apixaban group and 3.94% in the warfarin group (HR 0.89; 95% CI 0.80-0.99; P = 0.047). The rate of hemorrhagic stroke was 0.24% per year in the apixaban group compared with 0.47% per year in the warfarin group (HR 0.92; 95% CI 0.74-1.13; P = 0.42).

Major bleeding (defined according to ISTH criteria) occurred in 327 patients in the apixaban group and 462 patients in the warfarin group (HR 0.69; 95% CI 0.60-0.80; P < 0.001). For every 1000 patients treated, the authors have calculated that apixaban prevented six strokes, 15 episodes of major bleeding and eight deaths.

Commenting in the NEJM on the lower risk of haemorrhagic stroke observed with all three new anticoagulants, the authors suggest there may be a specific risk associated with warfarin, possibly related to its inhibition of multiple coagulation factors or interaction with tissue factor VIIa complexes in the brain.

In her accompanying editorial in the NEJM, Mega wrote switching to newer agents may not be necessary for individuals who are not in the high risk strata from the INR has been well controlled with warfarin. "Generic warfarin is expected to be markedly less expensive than the newer agents even after the costs associated with regular JN monitoring are considered," she said.

Continued from page 1

**ARISTOTLE Hot line results**

**NEJM**

**PURE Hot line results**

Lasting statin effect on all-cause mortality

**THE ALL-CAUSE mortality rate among patients prescribed a statin in a major trial that ended in 2003 remains lower than among those given placebo even though most participants in both groups have been taking statins ever since.**

The new analysis suggests that this persistent difference between the two groups is best explained by fewer non-cardiovascular deaths from infection and respiratory illness.

The original lipid-lowering arm of the Anglo-Scandinavian Cardiac Outcomes Trial (ASCOT-LLA) included 10,305 hypertensive patients from the UK, Ireland and Scandinavia. The trial was stopped prematurely because the active drug, atorvastatin, showed a 36% relative risk reduction in non-fatal MI and fatal coronary heart disease compared with placebo.

The new follow-up data were presented at an ESC Clinical Trial Update session yesterday and published simultaneously in the European Heart Journal.

The analysis is based on the 4605 patients based in the UK, and shows that – 11 years since initial randomisation and eight years since the trial was stopped – all-cause mortality remains significantly lower in those originally assigned to atorvastatin. Of this group, 460 have died compared with 520 of the placebo group.

There was a non-significant reduction in cardiovascular deaths among patients in the active treatment group. Non-cardiovascular deaths were, however, reduced by 14% in this group, and this was significant (CI 0.76-0.98; p = 0.02). Researchers said this was most likely attributed to a reduction in deaths from infection and respiratory illness.

"The result is very unexpected," said presenter and lead author, Professor Peter Sever from Imperial College, London. "The benefits of statins for preventing heart attacks and strokes are well established, but after long-term follow-up the most significant effects seem to be on deaths from other causes. It’s quite remarkable that there is still this difference between the two groups, eight years after the trial finished."

"Some studies have suggested that statins protect people against death from infectious diseases such as pneumonia. More research is needed to explain how these drugs might have unforeseen actions that prevent deaths from other illnesses," Sever said.

The EIU paper discusses possible mechanisms of action. Experimental studies have shown that statins have multiple effects; they modulate neutrophil function and reduce pro-inflammatory cytokine release.

Observational studies have shown that prior statin use reduces mortality from sepsis and community-acquired pneumonia, but the authors themselves note that observational, retrospective and meta-analytical studies cannot rule out the possibility of confounding bias - which "highlights the need for formal prospective, randomised controlled trials to be conducted".

They conclude: "Our hypothesis that there remains a longer-term legacy effect has, to date, no definitive explanation."

Continued from page 1

Peter Sever: All-cause mortality rates still lower in the statin group than in controls eight years after trial closure.
ACS encompass a wide spectrum of presentations ranging from unstable angina and non-ST segment elevation myocardial infarction (NSTE-ACS) to ST-segment elevation ACS and sharing a common pathophysiological pathway related to coronary plaque erosion or rupture with variable degrees of coronary obstruction and thrombosis.

NSTE-ACS is more frequent than ST-elevation ACS, with an annual incidence of approximately three per 1000 population. Patients with NSTE-ACS constitute a very heterogeneous group with a highly variable prognosis. Therefore, early risk stratification is essential for selection of medical as well as interventional treatment strategies.

It is in this context that the Guidelines Task Force chaired by Christian Hamm and Jean-Pierre Bassand provide another high-quality edition, which replaces previous versions first published in 2000 and updated in 2002 and 2007.

Several relevant introductions are included in the revised text. First, risk stratification now takes into account the advent of high-sensitivity troponin assays. The latter have largely replaced conventional troponin assays because of their higher analytical precision and diagnostic sensitivity, particularly during the early phase. Accordingly, the new guidelines recommend the implementation of a rapid rule-out protocol (at 0 and 3 hours) when high-sensitivity assays are available (Class of Recommendation I; LOE B). Furthermore, the guidelines advise the routine use of established risk scores for the assessment of prognosis (eg, GRACE) and bleeding (eg, CRUSADE) (IB).

Second, the pharmacological treatment of patients with NSTE-ACS now includes the most recent evidence in terms of anti-platelet and anticoagulation therapy. The use of newer P2Y12 receptor inhibitors – prasugrel and ticagrelor – has received particular attention. Ticagrelor is recommended for all patients at moderate-to-high risk of ischaemic events (IB), regardless of initial treatment strategy, including those pre-treated with clopidogrel and patients with unknown coronary anatomy. Prasugrel is recommended for P2Y12-inhibitor naïve patients in whom coronary anatomy is known and who are proceeding to PCI - unless there is a high risk of life-threatening bleeding or other contraindications (IB). Clopidogrel is reserved for those patients who cannot take ticagrelor or prasugrel.

As it relates to anticoagulation, fondaparinux is recommended as first choice (IA) - over enoxaparin (IB) and unfractionated heparin (IC) - in addition to antiplatelet therapy because of its favourable efficacy-safety profile among patients with low and medium-to-high risk ischemia. However, fondaparinux must be supplemented by additional doses of unfractionated heparin at the time of PCI.

Bivalirudin plus provisional GP IIb/IIIa receptor inhibitors is recommended as alternative to unfractionated heparin plus GP IIb/IIIa receptor inhibitors among patients with an intended urgent invasive strategy (IB) due to a very high risk of ischemia.

Thirdly, invasive techniques remain an integral part of the management of NSTE-ACS patients. An invasive strategy (<72 hours) is recommended in patients with at least one high-risk criterion or recurrent symptoms (IA); an early invasive strategy (<24 hours) is recommended in patients with a GRACE score >140 or with at least one high-risk criterion (IA); and an urgent coronary angiography (<2 hours) is recommended in patients at very high ischaemic risk (IC).

Moreover, since no safety concerns were raised in available studies with respect to the use of drug-eluting stents in patients with ACS, the guidelines state that drug-eluting stents can be used based on an individual assessment of benefit versus risk (IA) – noting the consistent reduction in repeat revascularisation procedures with their use.

Finally, the step-by-step work-flow provided in chapter 7 is very practical and includes excellent tables and figures to guide the reader through crucial steps in the diagnosis and treatment of this acute manifestation of coronary artery disease.

The Task Force must be complimented for providing this excellent and timely guideline, which undoubtedly will prove an invaluable resource for all healthcare professionals involved in the care of affected patients.
Should most atrial fibrillation patients be treated with catheter ablation?

Ahead of today’s debate

Yes (‘most’ patients), says
Stephan Willems
University Heart Center
Hamburg, Germany

No, says
Douglas L. Packer, MD
Heart Rhythm Services
Mayo Clinic Health Systems
St. Marys Hospital

The 80-90% success rates touted on websites are closer to 60-70% in reality.

The setting of paroxysmal AF, has been shown superior to anti-arrhythmic drug treatment with respect to freedom of arrhythmias during follow-up (77% vs 29% after 12 months). This effect is even more pronounced in studies which only include patients with paroxysmal AF. More than half the patients allocated to anti-arrhythmic drug treatment crossed over to catheter ablation during the study. Furthermore, catheter ablation also decreased hospitalisation for cardiovascular causes. Although repeat catheter ablation procedures are often required, long-term success rates of up to 80% are very realistic, thus potentially preventing the progression of paroxysmal to persistent AF.

Of course, the rate of major complications has to be taken into account, and this in experienced hands is around 2%. Although uninfomed patients may not request catheter ablation (though ever more do!), recent data on single centre experiences and analysis of large registries suggest a positive impact on long-term neurologic event-free survival. This observation is supported by data showing that catheter ablation reduces left atrial size and volume without adversely affecting left atrial function after successful treatment.

The 2010 ESC guidelines on the management of AF navigate us through the hazards of treatment decisions by offering the option of catheter ablation in symptomatic paroxysmal patients. Of course, this cannot be the option for “most patients with atrial fibrillation”, but reserved for the subset of patients with symptoms and paroxysmal AF but without well defined aetiology. Although many questions still have to be answered in ongoing studies (CABANA, AMICA, CASTLE-AF, EAST and others), today we can clearly consider catheter ablation as first-line treatment for many patients.

Thus, with ever declining complications and increasing success rates, catheter ablation may have us steer clear of Charybdis – the hazardous whirlpool of anti-arrhythmic drug treatment - and on to sinus rhythm, while avoiding the rocks of Scylla.


Odds ratios (ablation vs control) for freedom from AF at 12 months.

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<td>1.17 - 30.71</td>
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<td>13/59</td>
<td>23.25</td>
<td>6.51 - 63.57</td>
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<td>18.97</td>
<td>6.16 - 59.3</td>
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The obesity paradox should be laid to rest following the presentation of two abstracts today - and thereby end the best excuse yet for over-indulgence.

OBESITY is known to be a risk factor for many diseases - diabetes mellitus, hypertension, stroke, and heart and renal disease. However, despite this unequivocal association, obese people in some studies have been found to live longer than their normal weight counterparts - hence the frequently coined term “obesity paradox”.

Several studies have suggested such a paradox, including a systematic review of CVD in more than 250,000 patients from 40 cohort studies, which showed that, in comparison with people of normal weight, obese patients (BMI <20 kg/m²) showed a higher relative risk for total mortality (RR 1.37) than overweight subjects (BMI 25-29.9 kg/m²), who had the lowest risk for total mortality (RR 0.88). Similarly, a 2002 study of CAD patients having PCI showed that underweight and normal weight subjects had worse short and long-term outcomes than overweight and obese patients.

The two usual explanations for the apparent paradox are residual confounders or selection bias, and a possibly protective effect of obesity against the complications related to cachexic states. “It’s also possible that when CVD develops in the absence of an obvious cause (such as obesity or other risk factors) that something else unknown occurs which has a poor response to classical management,” proposes Antonio Arrebola Moreno from St George’s Hospital in London and the Hospital Virgen de las Nieves in Spain.

Fat: friend or foe?
Monday 29 August 11:00 - 12:30, Madrid - Zone D, Abstract 81 579, FP# 2123

The obesity paradox, he adds, has resulted in some people becoming complacent about weight gain.

In the first abstract Arrebola Moreno and colleagues assessed the relationship between obesity and the volume of myocardium at risk in patients after MI, utilising the Bypass Angioplasty Revascularisation Investigation Myocardial Jeopardy Index (BARI) score; this is calculated from an anatomical representation of the size and distribution of the coronary arteries and their lesions.

For the study the investigators assessed 106 patients admitted to hospital between July 2009 and December 2010 with AMI. Results showed that BMI was significantly associated with BARI score (Spearman r=0.21, p=0.034) and that this remained significant after adjustment for risk factors.

“What we have shown is that people with higher BMIs tend to have coronary lesions with higher amounts of myocardium at risk and that, if an MI occurs under these lesions, it is more likely that a larger area of heart muscle will be damaged,” said Arrebola Moreno.

In the second study Clara Carpeggiani and colleagues from the CNR Institute of Clinical Physiology in Pisa, Italy, set out to evaluate the impact of BMI on long-term mortality. Altogether, 10,446 patients hospitalised at their clinic over the last three decades for ischemic heart muscle damage, who had the lowest risk for total mortality (RR 0.88), were identified as independent markers for CV outcomes.

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The value of postprandial triglyceride levels for the prediction of cardiovascular events depends on individual glucose tolerance, according to the Homburg Cream and Sugar study (HCS) presented in Hot Line 1 yesterday.

Risk prediction with fasting serum triglycerides in high risk CV patients with normal and impaired glucose tolerance is uncertain. The HCS study, presented by Ulrich Laufs (pictured below) from Saarland University Hospital, Homburg, Germany, aimed to assess the effect of postprandial triglyceride levels in addition to glucose tolerance and traditional risk factors for CV event prediction.

For the purposes of the study patients were given an oral metabolic test consisting of a fat load (250 ml cream containing 75 g fat) followed by a glucose drink (75 g glucose dissolved in 250 ml water).

Altogether 514 patients with clinically stable CAD documented by coronary angiography were enrolled, who received an oral triglyceride tolerance test if having treatment for diabetes and an oral triglyceride and glucose tolerance test if not. Subjects were stratified into three groups according to maximal post triglyceride concentrations.

Results showed that the combined testing of postprandial glucose and triglyceride tolerance to be feasible in clinical practice, but that overall triglyceride concentrations did not correlate with primary events. In the subgroup of patients with normal glucose tolerance, however, both fasting and postprandial triglyceride levels were identified as independent markers for CV outcomes.
**Fire without smoke: Use of snus smokeless tobacco linked to lower MI survival rates**

By Janet Fricker

**ESC Congress News**

DISCONTINUATION of smokeless tobacco after a myocardial infarction is associated with a lower risk of subsequent mortality, according to a Swedish abstract presented yesterday during a webcast session on smoking.

Smokeless tobacco in the form of Swedish snus (oral moist snuff) has been advocated as a safer alternative to smoking. Snus takes the form of a finely ground and moistened tobacco, a bolus of which is placed under the upper lip for around an hour, with daily exposure times estimated to be around 10 to 12 hours. Different formulations exist, from loose tobacco to sachets.

In Sweden, snus is often used to help quit smoking, 20% of adult males and 4% of adult females are estimated to be daily users. The sale of snus is illegal in the rest of the European Union, but is increasing in the USA. “While cigarettes are indeed associated with more and more negative health effects, we now also have evidence that smokeless tobacco can’t be regarded as harmless,” said Gabriel Arefalk from Uppsala University in Sweden, the first author of the study. “In Sweden every time we discharge a MI patient who’s a snus user we’re faced with the important question of discontinuation.” A 2009 meta-analysis indicated that the use of smokeless tobacco results in a decreased risk of fatal MI, suggesting that snus use may predispose people to arrhythmic or other serious complications of MIs.

In the current prospective cohort study of the abstract, 20,911 consecutive patients aged 75 years or younger admitted between 1995 and 2006 to two Swedish hospitals for MI were followed up. At two months post-discharge information about risk factors such as past and present tobacco exposure, diabetes, hypertension, body mass index and waist circumference was recorded, as well as factors such as type of MI (STEMI/NSTEMI), participation in cardiac rehabilitation programmes, level of physical activity and occupation.

During a mean follow-up of 2.1 years, 812 of the participants died. Among the 1799 current snus users 69 died (incidence rate 18.7 per 1000 person-years-at-risk) versus 14 among the 675 post MI snus quitters (incidence rate 9.7 per 1000 person-years-at-risk). In a model adjusted for age, gender and present and past smoking status, the investigators found that post-MI snus quitters had a 44% lower risk of total mortality relative to current snus users. In a model which was further adjusted for diabetes, hypertension, systolic and diastolic blood pressure, and waist circumference, type of MI, participation in cardiac rehabilitation programmes, level of physical activity and occupational status, snus quitters had a 32% lower risk than current users.

“The reduced risk in snus quitters seemed to be independent of smoking habits but may be partly related to changes in other lifestyle behaviours, such as physical activity and participation in cardiac rehabilitation programmes,” said Arefalk. Ideally, the effects of quitting snus post-MI should now be studied in a randomised clinical trial, he added.


**High predictive value of anger levels for event recurrence post-MI**

By Janet Fricker

ESC Congress News

MYOCARDIAL infarction patients with high levels of anger should be routinely identified through tailored questionnaire and targeted with psychological and behavioural therapies to prevent second events, according to two abstracts.

Increasingly, psychological factors are recognised as playing a major role in triggering and modulating progression of ischaemic heart disease. “Negative emotions such as hostility, anger, depression, anxiety and social isolation are all cardio-toxic,” says Franco Bonaguidi, a psychologist from the Institute of Clinical Physiology of the Research National Council, Pisa, Italy. “By contrast, positive feelings characterised by imagination, empathy and spiritual interests are cardio-protective.”

Anger, he adds, a primitive emotion which cannot be switched off at will, is known to be a predictor of adverse outcomes in patients with cardiovascular disease.

“Anger can be constructive when it serves to help people overcome obstacles and reach certain objectives, but beyond certain levels it can trigger unfavourable hemodynamic, neural and endocrine changes through excessive sympathetic activation,” explains Bonaguidi. He added that anger can have further adverse cardiovascular effects by contributing to other self-destructive habits.

In the first study, to be presented in an abstract session tomorrow morning, Bonaguidi and colleagues assessed how anger-prone behavioural responses affect prognosis in patients who survived an acute MI. Altogether, 228 patients at the point of discharge were asked to complete a questionnaire which assessed anger (Cattell’s Sixteen Personality Factors Questionnaire) and one which assessed stress-related disturbance scores (Physiological Stress Evaluation System). Participants, who were followed-up for a median of 97 months, were divided into two groups according to their anger scores – high and low - with the process repeated for stress scores.

Results showed that subjects with high anger scores (reflecting unexpressed irritation, anger and feelings of hostility) had a 2.3-fold higher risk of suffering a new event than those with low anger scores. Subjects with high stress-related disturbance scores (reflecting perceptions of stress with symptoms such as sleep disturbances) had a 1.9-fold higher risk of a new event than those with low stress scores. As a prognostic determinant of future events, says Bonaguidi, anger measurements outperform left ventricular ejection fractions, heart rate variability and cholesterol scores.

“Psychological characterisation should be an integral part of the medical assessment of healthy and sick patients,” says Bonaguidi. He explained that self-administered questionnaires and psychological interventions could be easily introduced. “Following an MI there’s a special window of opportunity for changing patient behaviour since they’ve experienced a life-threatening condition often leading to reassessment of life balance and priorities,” he says.

Evolving evidence for psychosocial issues in heart disease,

*By Janet Fricker, ESC Congress News*
Strategies to improve the placement of stents

By Janet Fricker
ESC Congress News

IN THE EARLY days of interventional cardiology, the placement of stents was “like driving off-road, with each trip involving multiple tyre changes”, says Antonio Colombo, who will present this year’s Andreas Gruntzig lecture on interventional cardiology. “Today, he smiles, “the procedure is more like cruising along the free way”, though he still admits to a certain nostalgia for the challenges of the past.

It was the introduction of innovations by Colombo and colleagues which led to the overall rate of stent thrombosis falling from 8 or 9% in 1990 to around 1% today. And so, in his Andreas Gruntzig lecture this afternoon, Colombo, who has spent much of his career looking for practical solutions to sorting out problems with stents, will explore how dual anticoagulant therapy and better stent placement have helped bring these improvements about.

Initially Colombo, who is director of the Cardiac Catheterization Laboratory at Columbus Hospital and Chief of Invasive Cardiology at San Raffaele Hospital, both in Milan, had wanted to be a surgeon, but his US training taught him that “working from inside the vessel” was by far the smartest approach. Colombo still holds the position of visiting professor at Columbia Presbyterian Medical Center in New York, where he works for 10% of his time in interventional cardiology.

Undoubtedly, one of Colombo’s major contributions to the field was the introduction in 1990 of dual antiplatelet therapy with aspirin and ticlopidine for patients undergoing stenting. “It all came about in quite an unscientific fashion,” he remembers. “The surgeons told me that there was something around much more potent than aspirin. They mentioned that surgery patients taking ticlopidine had much more bleeding than those on aspirin.”

Another important issue is the appropriate duration of dual antiplatelet therapy after placement of a drug-eluting stent. There is still little scientific evidence behind current recommendations. “At first we advised patients to take dual therapy for one month,” he says. “Today, we say one year. The problem is that the field is evolving so rapidly that if we performed a study to evaluate the optimal duration of antiplatelet therapy the stent would most likely be obsolete by the time the results came out.”

There has been further recent progress with the introduction of new drugs, such as ticagrelor, which are thought to be more effective than clopidogrel. “Greater use of platelet testing to check if patients are responding has also helped improve the effectiveness of antiplatelet therapy,” he adds.

Colombo has also pioneered strategies such as high-pressure balloons and intravascular ultrasound (IVUS) for the optimal placement stents. Increasing balloon pressure from 7-8 atmospheres to 15-20 atmospheres has helped ensure the stents are pushed further back into the wall and embedded into the plaque. IVUS-assisted stent placement can offer real advantages for difficult cases, such as left main stem disease, bifurcations and multiple stenting. The technique allows the operator to visualise the full dimensions of the plaque in both the horizontal and longitudinal planes, to select the most appropriate stent and then to ensure it is well positioned.

“This approach ensures that the struts of the stent are well opposed to the wall and less likely to protrude into the lumen increasing the risk of restenosis and thrombosis,” says Colombo.

The big newcomer for 2012, he predicts, will be the introduction of totally bioabsorable drug-eluting stents in Europe. “To have the stent totally disappear is most probably the best guarantee against very late thrombosis, which is usually caused by the metallic struts not being properly covered by endothelium,” he says.

One subject about which he feels strongly is the lack of formal interventional cardiology training or accreditation in Europe. “There’s no exam at the end of training to check if interventional cardiologists are competent, and no quality control,” he says. “The result is that standards are very variable across Europe.”

A new option for your high-risk patients with aortic stenosis

To date, thousands of high-risk patients in Europe have received Edwards transcatheter heart valves as an effective therapy. Along with improved rates of survival, the landmark clinical study—the PARTNER Trial—demonstrated a 25-point improvement in quality-of-life scores for patients receiving a balloon-expandable transcatheter aortic valve compared to the standard treatment control group at one year.

For more information & to find a TAVI center near you please visit edwards.com/eu/products/transcatheterintervention
In the last 10 years, drug eluting stents have been the most important advance in coronary intervention. Rates of coronary restenosis have gone down dramatically using these stents, and they can be used in complex lesions such as in multivessel disease. The SYNTAX study proved the advantages of drug eluting stents and I use the SYNTAX score to make a decision on which is better: CABG or stent. Biodegradable stents are now available in Europe; they’re not yet out in Japan but we’re expecting BVS stents, which have a bioabsorbable structure, within a year. They will be suitable for younger patients with coronary artery disease.

Recently, the medical profession has been paying more attention to raised blood glucose, which we know is a big risk factor in the development of cardiovascular disease. But we could do more to pick up those with diabetes, insulin resistance and maybe impaired glucose tolerance. I’m not talking about population screening, but when people are visiting the family doctor, or public health doctors, for some other reason, they could have their blood glucose measured, and take an oral glucose test. We need to address this problem more aggressively; in America even small children are developing type II diabetes.

The concept of tele-rehabilitation, which involves monitoring patients from a distance, is not perfect yet, but, for example, patients who have had an MI and received conventional therapy can be fitted with motion sensors so that they can be followed at home. I am convinced that this will lead to better outcomes, fewer re-hospitalisations and reinfarcts, and a reduction in mortality. There’s a lot of research going on – we are doing a study in Belgium – and it’s an easy, basic intervention. Sometimes innovations are so technical and detailed they are difficult to implement but every doctor could use this. I really think it’s the future.

There are many important things. In interventional cardiology, we have percutaneous aortic valvular replacement; we can now replace an aortic valve without surgery. In clinical cardiology, we have new antithrombotic pills. Before we had only warfarin, but nowadays we have many other anticoagulants and we can change patients’ treatment. In acute coronary syndromes, we have lots of pills, dual and triple agents, antplatelet therapies and so on, and we can save lives with all of them. If I had to choose a single advance, I’d go for the new antithrombotics that have become available in the last year.