Ambulance as effective as cath lab for coronary reperfusion after STEMI

AMBULANCE administration of the P2Y12 platelet inhibitor ticagrelor was as effective as in-hospital administration for coronary reperfusion before PCI in patients with acute STEMI.

These were the bottom-line results of the much anticipated ATLANTIC trial (Administration of Ticagrelor in the cath Lab or in the Ambulance for New ST elevation myocardial Infarction to open the Coronary artery) presented at a Hot Line on Monday and published simultaneously in the New England Journal of Medicine.

The study also indicated that ambulance administration is safe, and may even reduce the risk of post-PCI stent thrombosis.

Investigator Gilles Montalescot from Pitie-Salpetriere Hospital, Paris, said: ‘Our study shows there is no downside to the earlier administration of ticagrelor’, and a reduced risk of stent thrombosis.

But findings from the Complete revascularisation improves STEMI outcome

Complete revascularisation was associated with a better outcome for MI patients with lesions in the non-infarct related artery (N-IRA) than intervention in the culprit artery alone. Indeed, current ESC and AHA/ACC guidelines recommend treating the infarct-related artery (IRA) only. But findings from the Complete versus Lesion-only PReimary PCI Trial (CVLPRIT) presented at a Hot Line session on Monday may prove practice changing. The study found a 55% reduction in MACE with total revascularisation at the time of primary PCI. Gershlick noted that there has since been criticism of the trial design, as a result of which PRAMI did not lead to widespread changes in clinical practice. Designed differently from PRAMI, the CVLPRIT study compared IRA-only treatment during index admission with complete revascularisation, with a primary endpoint of MACE.

A total of 296 MI patients presenting at seven UK interventional centres were randomised before PCI - one group to IRA-only revascularisation (n=146) and the other to complete revascularisation of both the IRA and all N-IRAs shown to be statistically significant block (n=150). For those in the complete revascularisation

Continued on page 2
Measuring fractional flow reserve improves treatment of non-STEMI

Colin Berry: ‘Measurement of fractional flow reserve is feasible and safe and avoids unnecessary stents and open-heart surgery.’

MEASURING the myocardial fractional flow reserve (FFR) in patients with non-ST segment elevation MI (NSTEMI) avoided stents or surgery in more than one-fifth of patients, according to the FAMOUS-NSTEMI study presented in a Hot Line on Monday.

Coronary angiography in NSTEMI patients detects obstructive coronary artery disease and identifies patients who may benefit from coronary revascularisation. ‘Treatment decisions are based on subjective visual interpretation of the angiogram which may result in over or underestimation of the physiological significance of the lesion,’ explained investigator Colin Berry from Glasgow University, UK.

The FAMOUS-NSTEMI trial, funded by the British Heart Foundation, set out to explore whether management decisions in NSTEMI patients having coronary angiography guided by routine FFR measurements would be feasible, safe and provide additional clinical utility. The FFR technique uses a pressure sensitive coronary guidewire to assess the physiological significance of a coronary stenosis expressed as the ratio of maximal blood flow in a stenotic artery to maximal flow in an unobstructed artery. A fractional flow reserve value of 0.80 indicates that patients can be managed safely with medical therapy without the need for coronary revascularisation.

FAMOUS-NSTEMI, said Berry, differs from recent trials of FFR-guided management (DEFER, FAME, FAME-2) which enrolled patients with stable coronary artery disease. ‘Now, to be included in this study patients needed a diagnosis of acute NSTEMI at least one risk factor for coronary artery disease (eg, diabetes mellitus), and to have either urgent invasive management planned within 72 hours of their heart attack, or a history of recurrent symptoms within five days. The study took place between October 2011 and May 2013, and 150 subjects with a clinical diagnosis of recent NSTEMI were randomised to receive either treatment based on visual assessment of CAD (n=174) or a diagnostic FFR used to refine the treatment decision (n=176). Enrolment took place at six UK hospitals.

For the primary outcome the proportion of patients treated initially by medical therapy was 22.7% in the FFR group and 13.2% in the angiography group (p=0.002). Information from the FFR procedure resulted in a treatment change between medical therapy, PCI or CABG in 21.6% of patients. The increased adoption of medical therapy at the expense of revascularisation in the FFR group was associated with similar overall health outcomes and quality of life at one year. ‘FFR is feasible and safe and avoids unnecessary stents and open-heart surgery,’ said Berry. A bigger study, he added, would definitively assess whether routine FFR-guided treatment would improve long-term survival and well being.

Continued from page 1

Complete revascularisation

group, the IRA was treated first followed by the N-IRAs. This was during the same index hospital admission, preferably in the same sitting.

The findings showed that one year after the procedure, patients in the complete revascularisation group had significantly better outcomes than those who had only their IRA revascularised. These results were based on the composite endpoint of MACE, which occurred in 21.2% of the IRA-only arm versus 10.0% of the complete revascularisation group (HR 0.45, p=0.009).

Not surprisingly, procedure time and contrast volume load were significantly higher in the complete revascularisation group than in the IRA-only group (55 vs 41 mins, p<0.0001; and 250 vs 190 mls, p=0.0001 respectively). But despite this the complete revascularisation patients had no increase in stroke, major bleeding or contrast-induced nephropathy.

Steen Dalby Kristensen, ESC spokesperson, said the CvLPRIT results would be considered ‘carefully’. ‘It’s better we do something with the lesions than not do anything,’ he commented. ‘The question is when to do it. We still need to find out if this is as good as doing it immediately.’

IBIS-4: high-dose statins reduce atherosclerosis after STEMI

High intensity statin therapy produced significant reductions in coronary atherosclerosis among STEMI patients following 13 months treatment in the IBIS-4 study reported yesterday. However, the study, published simultaneously in the EJH, showed no difference in the volume of necrotic cores.

While statins are known to reduce cardiovascular events, acute STEMI patients have not been included in intravascular ultrasoundography (IVUS) regression studies, despite their high risk of recurrence and high frequency of vulnerable plaques extending beyond the culprit lesion. For the Integrated Biomarkers and Imaging Study (IBIS-4) 103 patients with acute STEMI from five sites in Switzerland (taking part in the larger COMFORTABLE AMI study) had IVUS in the proximal part of the two non-infarct arteries immediately after primary PCI and received rosvustatin 20 mg for two weeks, increased to 40 mg over 13 months.

Results showed that at 13 months follow-up atheroma volume was reduced from 43.95 at baseline to 43.02 (p=0.007). No change, however, was detected in the volume of the necrotic core (p=0.93).

‘My conclusion is that you probably need more highly sophisticated imaging methods to detect statin-mediated alterations of the vessel wall,’ said study presenter Lorenzo Raber from Bern University Hospital, Switzerland, pictured left. It was against this background, he added, that investigators have decided to implement optical coherence tomography (OCT) in subsequent studies.

Still no intervention to prevent reperfusion injury in primary PCI

Giving the experimental agent TRO40303 to STEMI patients during primary PCI to prevent tissue damage proved ineffective in the MITOCARE study reported on Monday.

‘Reperfusion injury in STEMI patients remains an enigma that has not been amenable to any therapeutic interventions – despite 30 years of intense research,’ principal investigator Dan Atar from the University of Oslo said ruefully.

TRO40303, which binds directly to the cholesterol site of the mitochondrial outer membrane protein and appears to inhibit the opening of the mitochondrial permeability transition pore, has been shown to reduce infarct size by 50% in rat and mouse models and improve left ventricular ejection fraction. It has also shown protective effects on isolated human cells.

The MITOCARE study took place between October 2011 and September 2013 and 163 STEMI patients in ten interventional sites in Denmark, France, Norway and Sweden were randomised to an intravenous injection (6mg/kg at 35 mL/min) of either TRO40303 or placebo within six hours of onset of pain and prior to reperfusion by primary PCI.

For the primary end point of size of the infarct, the mean creatine kinase (CK) level was 77558.4 U/L for the TRO40303 group and 7455.3 U/L for the placebo group. Similarly, for troponin I the mean levels were comparable.

‘A high standard of care accounted for the relatively small infarct size after primary PCI, leaving little room for improvement,’ said Atar. ‘These results combined with many failures in the field raise a provocative issue - whether reperfusion injury occurs at all in man, and if it does, whether this type of injury really accounts for a significant part of the remaining infarct.’

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New ESC guidelines on non-cardiac surgery

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The 2014 GUIDELINES on cardiovascular assessment and management in non-cardiac surgery focus on patients in whom heart disease is a potential source of complications during surgery.

The guidelines are the result of collaboration between the European Society of Anaesthesiology (ESA) and the ESC, with involvement of several of Associations, Councils and Working Groups.

The risk of perioperative complications depends on the condition of the patient prior to surgery, the prevalence of co-morbidities, the magnitude and duration of the surgical procedure, and the circumstances under which it takes place. More specifically, cardiac complications can arise in patients with documented or asymptomatic ischaemic heart disease, left ventricular dysfunction, and valvular heart disease who undergo procedures associated with prolonged haemodynamic and cardiac stress.

Unfortunately, no systematic European data are available on the annual number and type of operations, nor on patient outcome - and only at a national level in just a few European countries. Moreover, data definitions as well as data quantity and quality vary. When the available data are applied to the total European population, such figures translate into a crude estimate of 19 million major procedures annually.

While the majority are performed in patients with minimal cardiovascular risk, 30% of patients do undergo extensive surgical procedures in the presence of cardiovascular co-morbidity. Hence, 5.7 million procedures are performed each year in European patients who present with an increased risk of cardiovascular complications. At least 167,000 cardiac complications, of which 19,000 are life-threatening, as a result of 312 non-cardiac surgical procedures annually have been estimated.

Furthermore, the acceleration in population ageing over the next 20 years will have a major impact on perioperative patient management. It is estimated that elderly people require surgery four times more often than the rest of the population. Although precise data on the number of old patients having surgery in Europe are lacking, it has been reported that their number will increase by 50% by 2020.

The total number of procedures will increase even faster because of the rising frequency of interventions with age.

The new guidelines recommend a practical, stepwise evaluation of the patient, which integrates clinical risk factors and test results with the estimated stress of the planned procedure. This means an individualised cardiac risk assessment, with the opportunity to initiate medical therapy, coronary interventions, and specific surgical and anaesthetic techniques to optimise the patient’s perioperative condition.

RCT evidence on a specific cardiac management regimen in the surgical setting is sparse, and data from the non-surgical setting are frequently used, with similar recommendations made but with different levels of evidence.

Emphasis is placed on the restricted use of prophylactic coronary revascularisation, as this is rarely indicated simply to ensure that the patient survives surgery. The majority of patients with stable heart disease can undergo low and intermediate risk surgery without additional evaluation. Selected patients require an integrated multidisciplinary approach from anaesthesiologists, cardiologists, internists, pulmonologists, geriatricians, and surgeons.

As in the 2009 guidelines, this update is organised in several different stages, which include preoperative risk evaluation, followed by risk reduction strategy, perioperative management, and monitoring. Selected clinical situations such as heart failure, arterial hypertension, valvular heart disease, arrhythmias, renal disease, cerebrovascular disease, pulmonary disease, peripheral artery disease and congenital heart diseases are selectively considered.

The new guidelines present in algorithmic form an evidence-based, stepwise approach to determining which patient benefits from cardiac testing, coronary artery revascularisation, and cardiovascular therapy before surgery.

Now, with the introduction of perioperative cardiac guidelines, their effect on outcome should be monitored. The evaluation of changes in outcome will form an essential part of future guideline development.
Study closes door on high dose statins to prevent post-op AF

Intensive perioperative treatment with statins had no beneficial effects on postoperative atrial fibrillation (AF) or heart muscle damage following CABG surgery in the investigator driven STICS study presented in a Hot Line session yesterday.

‘There are many reasons why these patients should be put on statin treatment but the prevention of postoperative complications is now not one of them,’ concluded study presenter Barbara Casadei from the University of Oxford, UK. STICS, she added, had recruited more patients than in all the other trials of perioperative statins in cardiac surgery combined.

Despite improvements in surgical techniques for CABG and perioperative care, postoperative complications - in particular MI, AF and renal failure - involve 30-40% of patients. ‘Postoperative AF in particular is associated with a two fold increase in stroke and mortality in the postoperative period,’ said Casadei, adding that an analysis has recently shown that such complications are associated with an increase in cost of £8-18,000 for each patient having cardiac surgery.

The results from small trials have shown that the incidence of AF can be halved with two or three days of statin treatment prior to surgery, and heart muscle injury, MI and even postoperative death presented in some cases. However, said Casadei, these trials were limited by their small size (only 1300 patients were involved across 14 trials), assessments were not always blind, and were only performed in statin naive patients.

Now, the STICS (Statin Therapy in Cardiac Surgery) trial randomised 1922 patients in sinus rhythm with no history of AF to rosuvastatin (20 mg daily) or placebo. The patients had no history of AF. Treatment was started up to eight days prior to surgery, and continued for five days after surgery.

The study was a collaboration between the Clinical Trials Service Unit of the University of Oxford and the National Centre for Cardiovascular Diseases at Fuwai Hospital in Beijing. Casadei noted that all patient recruitment took place in China, which was rapid and explained why so few patients (only 35%) were on background statins at the time of surgery.

Results showed that the main outcome of postoperative AF (assessed by 5-day Holter ECG) was reached by 23% of the statin patients (203 events) and 20% of placebo patients (197 events). Whether patients had received statins or non-steroidal anti-inflammatory drugs prior to surgery, were treated for longer than two days, or had on or off-pump surgery made no difference to postoperative AF outcomes. The study furthermore found no difference in cardiac muscle injury (measured by troponin levels) between the two groups.

‘While this is a definitive answer for this population - that statins do not prevent AF after CABG - I’d don’t want this message to get mixed up with the need for treating these patients with statins for their long term effects in lowering LDL cholesterol,’ said Casadei.

ESC spokesperson Keith Fox described the study as a robust study to answer this question.‘Until now we have had contrasting evidence about this combination therapy and therefore conflicting recommendations about it. However, this study seems to settle the question.’

Rivaroxaban effective for cardioversion

Oral rivaroxaban appears an effective and safe alternative to vitamin K antagonists (VKAs) for cardioversion in atrial fibrillation (AF), according to the X-VeRT trial presented yesterday and published in the EJH.

Symptomatic AF patients undergoing cardioversion to restore sinuses rhythm have a high risk of thromboembolic events with around 5-7% of non-anticoagulated patients suffering stroke. Use of VKAs both before and after cardioversion is endorsed by guidelines. However, one major obstacle to using a VKA, explained study presenter Riccardo Cappato from the University of Milan, Italy, is that more than three weeks are required to achieve stable therapeutic INR values. The characteristics of rivaroxaban, he said, seem useful in cardioversion because of its rapid onset of action - within two to four hours, which can expedite cardioversion.

The X-VeRT study compared the two agents in 1504 patients scheduled for electrical or pharmacological cardioversion. They were randomised to oral rivaroxaban 20 mg once daily (n=1002) or VKA (warfarin or another VKA) (n=502). Additionally, they were assigned to either early or delayed cardioversion. The study involved 141 centres in 16 countries.

Results showed that in the early cardioversion group the primary composite endpoint (stroke or TIA, peripheral embolism, MI and cardiovascular death) occurred in 0.71% of the rivaroxaban group and 1.02% of the VKA group. In the delayed cardioversion group the primary endpoint occurred in 0.24% of the rivaroxaban group and 0.93% of the VKA group.

For the delayed group median time to cardioversion was 22 days for rivaroxaban and 30 days for VKA (p=0.001). No clinically important differences in the overall incidence of adverse and serious adverse events were observed according to treatment or cardioversion strategy. ‘In summary,’ wrote the authors, ‘oral rivaroxaban appears to be an effective and safe alternative to VKA and may allow prompter cardioversion.’

No edge from adjuvant steroid in tuberculous pericarditis, from first African trial at ESC

The addition of prednisolone to TB therapy for patients with pericarditis did not improve their outcome, according to the IMPI trial reported yesterday. Moreover, the combination of prednisolone with TB treatment could increase the risk of cancer in those patients also infected with HIV. The study was published simultaneously in the New England Journal of Medicine.

TB infects around 10 million people every year worldwide and the global epidemic is growing according to the WHO. Tuberculous pericarditis occurs in around 10% of these cases, and is the most serious form of pericardial disease in the world.

The condition is associated with high morbidity and mortality even if anti-TB therapy is given. Disease complications include cardiac tamponade and constrictive pericarditis. The incidence of tuberculous pericarditis is increasing in Africa as a result of the HIV virus, with figures showing that two-thirds of people with tuberculous pericarditis are HIV positive.

IMPI was the first multinational trial of tuberculous pericarditis and the largest trial of adjuvant steroids in TB-associated HIV. A total of 1400 adults, from 19 hospitals in eight African countries, with definite or probable tuberculous pericarditis, were enrolled. Two-thirds were also HIV positive.

All patients were randomly assigned to either prednisolone or placebo. After six weeks, they were further randomised to either Mycobacterium indicus panici (MIP) immunotherapy or placebo administered in five injections over the course of three months concomitantly with anti-TB treatment and anti-retroviral drugs where needed. The primary efficacy outcome was a composite of death, cardiac tamponade requiring pericardiocentesis or constrictive pericarditis.

Results showed no significant difference in the primary outcome between those given prednisolone or placebo (23.8% vs 24.5% - nor between those on MIP immunotherapy or placebo (23% vs 24.3%). However, compared with placebo, both prednisolone and MIP immunotherapy were associated with a significant increase in the incidence of cancer (4.4% vs 7.8%, HR=0.56, p=0.009), explained mainly by an increase in HIV-associated cancer.

The use of adjuvant steroids did reduce the incidence of pericardial constriction and hospitalisation, both clinically important according to trial investigator Bongani Mayosi. These effects were similar in HIV-positive and HIV-negative patients.

Mayosi, from Old Groote Schuur Hospital in Cape Town, said: ‘Until now we have had contrasting evidence about this combination therapy and therefore conflicting recommendations about it. However, this study seems to settle the question.’

This is the first time that results from a clinical trial conducted in Africa have been presented at an ESC congress. Salim Yusuf, a co-investigator on IMPI, said: ‘It’s fantastic that this large study was done in such an under-resourced setting and that this is the first African ESC Hot Line. By doing studies in Africa on African people we will hopefully help solve some of their problems.’
A bonus of well-being for old age?
50% of centenarians say their health status is ‘good’

LIFE EXPECTANCY in many - but not all - developed countries is now well over 80 years, with women likely to live two or three years longer than men. Russia and one or two other countries of eastern Europe are exceptions, with life expectancy there around ten years less than in France or Italy, for example.

Nevertheless, the life expectancy rates reflect a shift in demographics which is moving at a remarkable pace - such that the ‘elderly’ are now the most populous groups in many countries. In Japan, for example, one of the world’s most rapidly ageing countries, there were almost ten people under 20 for every person over 65 in 1950; by 2025 this ratio is expected to be 0.59 people under 20 for every one over 65.

Such a grey population has put strain on social and health care systems, and raised questions about the general health of this growing group of elders. Will their age-related ill-health simply be extended by longer life, or will these extra years be a bonus of well-being?

A remarkable study performed by researchers at the University General Hospital Gregorio Maranon in Madrid and reported in an Abstract Session on Sunday investigated a truly exceptional group of elders and found that most people living beyond one hundred have an abnormal electrocardiogram, and half have aortic regurgitation. Manuel Martinez-Sellés said that the centenarian population has increased rapidly in recent years and it is now more common to see centenarians in clinical practice. In 2011 there were estimated to be 370,000 centenarians globally, a number projected to grow to 3.2 million by 2050.

Martinez-Sellés said: ‘Our data suggest an age-related effect on the heart that influences functional status and prognosis. This effect be taken into account when developing strategies to mitigate the changes that occur with age.’

The study also revealed a high prevalence of dependency, malnutrition and cognitive impairment. However, nearly half of the centenarians considered their health status to be very good, with 45% scoring 8 or more out of 10 on a health rating scale of 1 (worst) to 10 (best).

Similarly, a nine-year study of almost 4000 people performed in Denmark and also reported on Saturday found that resuscitation after cardiac arrest is worthwhile in those over 80. The study included all patients with out-of-hospital cardiac arrest in Copenhagen who were treated by the physician-based emergency medical systems. One quarter of those evaluated were octogenarians.

The study included 342 patients older than 65 admitted for heart attack should be routinely assessed for frailty. Hospital of Valencia, suggest that elderly patients admitted with a diagnosis of angina or MI. At discharge five 30-month median follow-up.

Of those who were successfully resuscitated and survived are able to live an active life after the incident.’

However, a study from Spain reported in an Abstract Session on Saturday found that frailty triples the risk death and repeat events in elderly MI patients. The findings, said Clara Bonanad from the University Clinic Hospital of Valencia, suggest that elderly patients admitted for heart attack should be routinely assessed for frailty. The study included 342 patients older than 65 admitted with a diagnosis of angina or MI. At discharge five 30-month median follow-up.

Results showed that all five conditions had a statistically significant association with deteriorating outcome, with frailty the strongest independent predictor of death or recurrent MI.

Francisco Javier Martínez-Sellés, left, found that most centenarians have an abnormal ECG, while Helle Søholm said resuscitation after cardiac arrest is ‘worthwhile’ in the over-80s.
Scientific excellence rewarded at ESC Congress 2014

At Monday’s Award Ceremony, ESC President Elect Fausto Pinto presented the winners of the Young Investigators Awards, Challenging Case Reports, Moderated Posters and Nursing and Allied Health Professionals Investigator Awards.

Those selected as winners and runners-up of this year’s awards were:

- Young Investigators Awards:
  - Rincon Luis Miguel, Nissen Bonde Anders, Jones Daniel
  - Schjerning Olsen Anne-Marie, Jansen Felix, Dubois Emilie
  - Kohayashi Junko, Panani Francesca, Roman Dogano Irene
  - Costanzo Pierluigi, Name Anna-Karin, Lamberts Morten, Ishigami Shuta
  - Assress Kaleah, Bando Sachiko, Cavender Matthew, Nishimiya Kensuke
  - Vergallo Rocco, Mangold Andreas, Xie Jun

- Nurse Investigators Awards:
  - Hendriks Jeroen, Wemaas Liv, Rippar Todd

- Challenging Case Report:
  - Ammirati Enrico, del Castillo-Carnevali Hugo Angel, Placido Rui, Nishi Masahiro
New study findings in atrial fibrillation

WITH PREVALENCE of atrial fibrillation predicted to double in Europe by 2050, an ESC press conference yesterday considered studies exploring different aspects of a condition that all too often goes undetected. The presentations explored opportunistic screening in general practice, adverse events of digoxin and the risk of stroke.

‘AF represents the most common cardio-embolic cause of ischaemic stroke, and is responsible for nearly 20% of strokes,’ said Jean-Marc Davy from the University of Montpellier, France. With around 30% of AF patients having no discernible symptoms, he added, there is a need for screening to be more widely introduced.

Davy presented the results of the French PROFIL-FA study in which 4892 patients over 65 were screened by more than 600 GPs. As a result of the screen 585 were referred to cardiologists for follow-up and 129 eventually diagnosed with AF. The GPs had examined patients for irregular pulse rate and asked about symptoms indicative of AF such as palpitations, fatigue, palpitations, chest pain and shortness of breath.

The results showed that irregular pulse had a sensitivity of 74.2%, adding in at least two symptoms increased sensitivity to 80%. This combination (symptoms in addition to irregular heart rate), could potentially identify a further 75 AF patients.

‘Our results reflect the difficulty in diagnosing AF in patients with a regular pulse,’ said Davy.

Use of digoxin in AF patients may need reappraisal after a new analysis of data from the ROCKET AF study showed digoxin to be associated with adverse outcomes. While digoxin has never been formally studied in patients with AF, current American and European guidelines recommend its use for controlling heart rate.

Using the ROCKET AF data, which compared stroke prevention for AF patients assigned to rivaroxaban or adjusted warfarin, the investigators compared outcomes in both groups.

‘The ROCKET AF trial was one of the largest AF trials conducted that compared outcomes in both groups. The ROCKET AF trial was one of the largest AF trials conducted that compared outcomes in both groups.’

Jean-Marc Davy proposed greater use of opportunistic screening for AF.

Manesh Patel: a need ‘to better define the role of digoxin in AF’.

Thomas Vanassche: ‘Type of AF is one factor to help assess stroke risk.’

Results showed yearly stroke rates were 4.2% for patients with persistent AF, 3.0% for patients with paroxysmal AF, and 2.3% for patients with paroxysmal AF.

Multivariable analyses identified age, sex, history of stroke/TIA and AF type as independent predictors of stroke risk, with AF type representing the second strongest predictor after prior stroke/TIA.

‘Our results suggest that type of AF is one factor that can help assess the risk of stroke for a given patient and whether anticoagulant therapy would be of benefit,’ said Vanassche, who added that patients at intermediate or high risk of stroke should receive anticoagulation therapy. ‘Since the type of AF can change over time,’ he said, ‘it’s important for patients to be regularly followed up.’

<table>
<thead>
<tr>
<th>Patient Name</th>
<th>Age</th>
<th>Diagnosis</th>
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<tbody>
<tr>
<td>Susan</td>
<td>64</td>
<td>Persistent AF</td>
</tr>
<tr>
<td>John</td>
<td>70</td>
<td>Paroxysmal AF</td>
</tr>
<tr>
<td>Mary</td>
<td>65</td>
<td>Permanent AF</td>
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<tr>
<td>Michael</td>
<td>80</td>
<td>Persistent AF</td>
</tr>
<tr>
<td>Henry</td>
<td>81</td>
<td>Paroxysmal AF</td>
</tr>
</tbody>
</table>

EVERTY AF PATIENT IS DIFFERENT. ORAL ANTICOAGULANTS NEED TO ADDRESS THIS.

| Treatment of AF should be tailored to the specific patient’s needs. Every patient presents with their own individual factors that need to be considered when initiating them on oral anticoagulation therapy. |

References:

AF: Atrial Fibrillation
Date of preparation: July 2014, ESC/14/0015

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Step 1
Download the MyHF application on your patient’s smartphone prior to hospital discharge or during consultation.* MyHF is available for iPhone and Android.

Step 2
MyHF helps to optimize your patient’s compliance, involvement, and self-care and also helps gather serial data to aid decision-making during the patient’s appointment:
- Weight
- Blood pressure
- Heart rate
- Quality of life

Step 3
Advise your patient to enter heart failure measurements regularly at home, even if he or she is feeling well.

Step 4
Use the MyHF application to evaluate your patient’s serial measurements during his or her clinic appointment.

*If available in your country (check with your Servier local contact)