The ESC Scientific Session 2010, Stockholm, Sweden
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The European Society of Cardiology Congress has been held this year in Stockholm, Sweden between 28th of Aug. and 1st of Sep. 2010. Stockholm is strategically located on 14 islands on the south-central east coast of Sweden at the mouth of Lake Malaren. Over 30% of the city area is made up of waterways and another 30% is made up of parks and green spaces; in 2009, Stockholm was awarded title of first European Green Capital by the European Commission. It is the second most visited city in the Nordic countries after Copenhagen.

The results of several trials and the new ESC guidelines release have made this meeting one of the most exciting.

A new genetic substudy of PLATO (A Study of PLATElet Inhibition and Patient Outcomes) showed that the effects on a combined primary endpoint of cardiovascular death, myocardial infarction, or stroke seen in Acute Coronary Syndromes (ACS) patients who received ticagrelor were maintained, whether or not they had the genetic variability that has been previously shown to affect a patient’s response to clopidogrel. The substudy is the first to look at both efficacy and bleeding endpoints of ACS patients treated with ticagrelor who carry variations in the CYP2C19 and ABCB1 genes.

The new Guidelines for the Management of Atrial Fibrillation (AF) have been released and recommend that dronedarone should be used for maintenance of sinus rhythm as a first-line treatment option in all patients with paroxysmal and persistent AF (class of recommendation I, level of evidence A) other than those with CHF NYHA class III/IV or unstable CHF NYHA class II (class of recommendation III, level of evidence B). Importantly the new guidelines include, for the first time, a state-
ment on the importance of reducing hospitalization as a key therapeutic goal in the management of AF. However, the guidelines do not recommend use of dronedarone in patients with NYHA class III and IV or with recently unstable (decompensation within the prior month) NYHA class II heart failure.

HEBE III: A single dose of erythropoietin (EPO) in ST-elevation myocardial infarction has showed that a single high dose of EPO after a successful PCI for an STEMI did not improve LVEF after 6 weeks. However, the use of EPO was related to less major adverse cardiovascular events and a favourable clinical safety profile.

With a reduction of hospital admissions for worsening HF from 20.6% to 15.9% (HR, 0.74, 95% CI 0.66–0.83, p<0.0001) and deaths due to HF (HR, 0.74, 95% CI 0.58–0.94, p=0.014), SHIFT (Effects of ivabradine on cardiovascular events in patients with moderate to severe chronic heart failure and left ventricular systolic dysfunction) confirms the importance of HR in the pathophysiology of HF and supports the concept that reduction in HR contributes significantly to beneficial outcomes in patients with HF. In patients with systolic HF in SR with HR >70 bpm, receiving usual clinical care and unable to tolerate higher doses of BB, the addition of the pure HR reducing agent ivabradine is likely to improve HF outcomes.

ATOLL (An international, randomized trial comparing i.v. enoxaparin with i.v. unfractionated heparin in primary PCI for ST-elevation myocardial infarction) is the first randomized study in primary PCI that compares two different anticoagulants in STEMI patients naive of anticoagulation at the time of randomization and receiving similar antiplatelet therapy. At 30 days the primary endpoint of death, myocardial infarction, procedural failure or non-coronary artery bypass grafting major bleeding occurred in 28% of patients randomized to enoxaparin and 33.7% of patients randomized to unfractionated heparin RR 0.83; 95% CI 0.68 – 1.01; p=0.07. The main prespecified ischemia endpoint of death, recurrent myocardial infarction, acute coronary syndromes or urgent revascularization was reduced from 11.3% to 6.7%; p=0.01 with enoxaparin.

Low compared to standard dose UFH did not reduce major peri-PCI bleeding and vascular access site complications in FUTURA OASIS 8 (A randomised trial comparing two regimens of adjunctive intravenous unfractionated heparin during PCI in high-risk patients with non-STE-ACS treated with fondaparinux). Catheter thromboses are rare in NSTE-ACS patients treated with fondaparinux when UFH is added during PCI. Based on the FUTURA results, it seems that pretreatment with fondaparinux is still not sufficient to allow to reduce the UFH dose for patients undergoing PCI. However, fondaparinux may still be used in non-high risk patients in whom immediate/early angiography may be postponed or not considered.

In patients with atrial fibrillation at risk for stroke and unsuitable for therapy with a VKA, apixaban reduces the risk of stroke or systemic embolism by 57% with no significant increased risk in major hemorrhage in AVERROES: Apixaban Versus Acetylsalicylic Acid (ASA) to Prevent Strokes. Apixaban offers an important advantage over aspirin for prevention of stroke in these patients. When comparing the results from AVERROES with those of the RELY study with the factor IIa inhibitor dabigatran, and those of metaanalyses with VKA and ASA, it seems to be comparable effects with the anticoagulant principles apixaban, dabigatran and VKA, although with more bleedings with the routine use of VKA.

A clear conclusion from CARE-HF LTFU is that delayed CRT implantation is associated with a persistent reduction in overall survival. Based on this information, delaying CRT implantation in eligible patients - based on the inclusion criteria of the CARE-HF main study - cannot be justified. The median survival of more than 7 years for patients with advanced heart failure, dysynchrony and an age of less than 66 years treated with a CRT-P device without defibrillator backup is remarkable.