

Hot news from ESC Congress, Munich, Germany, August 29 – September 3

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This year The European Society of Cardiology (ESC) Congress was held in Munich, Germany, Aug 29 – Sept 3. In this meeting were accepted more than 3500 abstracts. It is the most important educational and research congress of cardiology from Europe.

The ESC Congress featured almost 400 scientific sessions during a 5-day time span,

covering virtually the whole spectrum of the field of cardiology.

The most important sessions were hot line sessions and guidelines sessions.

In the field of new treatment perspectives, the major findings discussed were novel anticoagulants, which are administered orally and have no requirement for coagulation monitoring, as a new therapeutic strategies for

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atrial fibrillation (AF) and also for acute coronary syndrome (ACS).

Study are currently under way in AF, with the **RELY** study evaluating the safety and efficacy of dabigatran (direct thrombin inhibitor), the **ROCKET** study of rivaroxaban, and the **ARISTOTLE** study of apixaban (oral Factor Xa inhibitors).

The phase 2 apixaban study, known as **APPRAISE-1**, was presented at this congress. The study included 1715 patients with a recent ACS (≤ 7 days) and was designed to test different doses of apixaban on top of standard antiplatelet therapies: 2.5mg twice daily, 10mg daily, 10mg twice daily, 20mg once daily for 6 months. For the highest doses data showed an excess of major and minor bleeding, and these doses were discontinued. Investigators observed a trend in reduction of ischemic events, with the 10mg dose having the lowest incidence of cardiovascular death, MI, or stroke.

This is the first experience using a direct factor Xa inhibitors for secondary prevention in ACS.

Other important trial were discussed in the hot line sessions, such as **ATHENA**, **BEAUTIFUL**, **SEAS trials** etc.

The **ATHENA** study is by far, the largest randomized AF drug trial, a placebo-controlled, double-blind trial designed to assess the efficacy of dronedarone 400mg twice daily for the prevention of cardiovascular hospitalization or death in patients with atrial fibrillation/atrial flutter. The study randomized 4628 patients, age 70 or older who had paroxysmal or persistent AF at moderate-to-high risk to receive dronedarone or placebo. After 2 years of follow up, patients who received dronedarone demonstrated a 24% risk reduction in cardiovascular hospitalization or death, a significant reduction in the risk of cardiovascular death by 30% ($p=0.03$) and arrhythmic death by 45% ($p=0.01$), and no increase in drug-related side effects compared with placebo. The drug acts to block calcium, potassium, and sodium channels and has anti-adrenergic effects as well, with rhythm and rate control properties. It also does not contain the iodine radical and did not show any evidence of thyroid or pulmonary toxicity.

A question about the safety of this drug in the recent decompensated heart failure still remain, because NYHA class IV patients were excluded from the ATHENA trial. The evidence from this trial showed that in the NYHA class II/

III heart failure patient population dronedarone appears to be very safe.

Results from the long awaited **BEAUTIFUL** study were also presented in a hot line session and reported simultaneously online by the **Lancet**.

This trial was designed to evaluate if pure heart rate reduction with If current inhibitor ivabradine improves cardiovascular outcomes among patients with stable coronary artery disease (CAD) and left ventricular dysfunction. This randomized, double-blind, placebo-controlled trial recruited 10,917 CAD patients with LV ejection fraction $< 40\%$. Patients received ivabradine 5 mg, with the intention of up titrating to 7.5mg twice daily or placebo, on top of recommended guidelines medication. Most patients were receiving beta-blockade (87%).

Results showed that ivabradine had no effect on the primary composite endpoint – a composite of death, admission to hospital for hearth attack, or for new or worsening heart failure. However, in a subgroup of patients with heart rate of ≥ 70 bpm, despite optimal therapy, ivabradine reduced the secondary endpoints of admission to hospital for fatal and nonfatal MI (36%, $p=0.001$) and coronary revascularization (30%, $p=0.016$).

This subgroup of patients have a significant higher risk of cardiovascular mortality (34%), hospitalization for heart failure (53%), for acute myocardial infarction (46%) and coronary revascularization (38%).

The first full data of the **SEAS** trial were presented at the ESC congress and simultaneously online by the **New England Journal of Medicine (NEJM)**, along with a metaanalysis of cancer data from other two trials with the simvastatin-ezetimibe combination.

This study included 1,873 patients with mild to moderate, asymptomatic aortic disease. Results showed that the combination of simvastatin-ezetimibe lowered LDL levels by more than 50%, but had no impact on the progression of aortic stenosis or major cardiovascular events.

It has also been suggested an increased cancer risk associated with simvastatin-ezetimibe combination. The analysis from NEJM of SHARP (9,400 patients) and IMPROVE-IT trial (12,000 patients) trials does not support the suggestion of an increase in cancer risk with this combination.

In the guidelines session, the new much-awaited ESC guidelines were presented for the first time, namely: management of acute and chronic heart failure, diagnosis and treatment of acute pulmonary embolism, universal definition of Myocardial Infarction, Prevention of Infective Endocarditis.

It were also presented conferences about genetic research in cardiology, prevention, hypertension, arrhythmias, ACS. Mechanisms

and treatment of heart failure with preserved LV ejection fraction were still a matter of debate.

New imaging techniques and their importance in diagnosis and treatment were discussed, such as tissue doppler imaging, speckle tracking, torsion evaluation, strain and strain rate, 3D/4D echocardiography, cardiac MRI and CT.

Next year, the ESC Congress will be held in Barcelona, Spain.

