

Heart Failure and Europace 2005

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The 2005 year has abounded in many crucial cardiologic and cardiosurgical congresses and conferences, beginning in Lisbon (Heart Failure), through Prague (Europace), Stockholm (ESC), ending in Barcelona (EACTS). Many important trails have been finished and have been presented during these Conferences, as an example: CIBIS III, PREAMI, SIRIUS II, CLARITY and TNT. Here you can find a short communication related to two of mentioned above conferences.

Heart Failure 2005

The annual meeting of the *Heart Failure Association* (HFA of the ESC) *Heart Failure 2005* in Lisbon, Portugal, June 11-14 2005, was exceptionally successful. At the Opening Ceremony, the HFA of the ESC celebrated the 10th Anniversary of Heart Failure within the European Society of Cardiology.

Much over 4000 participants took part in this event, 1195 abstracts were submitted for the review process, out of which 554 have been accepted.

It was a very successful meeting which took place in a great scenery. Lisbon is a beautiful town with a special atmosphere and with great moist climate from Tag River and the Atlantic Ocean. During the conference the weather – sunny with the temperature till 24 degrees, was suitable to the important debates which took place in modern Lisbon Congress Centre on the Praça das Indústrias.

There were many very interesting oral presentations, moderated posters and posters. In our opinion two workshops were uniquely interesting. The first – *Clinical research methodology in heart failure* (Chairmen: Prof. McMurray from Glasgow and Prof. Abreu E Lima from Porto) was dedicated to two essential subjects – the suitable preparing of a manuscript to be published in the best medical journal (with high impact factor) and the preparing and managing of a clinical trial. The former theme was brilliantly presented by Prof. Dickstein and the latter by Prof. McMurray. I hope Prof. Dickstein agrees to present his presentation in one of the following issues of Archives of Medical Science. It will be a great occasion for our readers – young scientists to get to know the secrets of the publishing art.

During another workshop – I think the most interesting one – *Statins in heart failure – Cholesterol-lowering is not the only goal* (Chairmen: Prof. Kjekshus from Oslo and Prof. Charron from

Paris) the mechanisms, influence and the role of statins in patients with heart failure was described.

Dr. Ulf Landmesser (Hanover, Germany) discussed how low cholesterol levels are associated with poor outcomes in patients with congestive heart failure (CHF). He proved that statins have an essential role in the management of CHF, which is connected with their pleiotropic effects and are independent of the drugs' cholesterol-lowering effects. His team examined the beneficial effects of statins in animal models of post-myocardial infarction HF. They have also evaluated the influence of simvastatin on endothelial function in a group of patients with CHF. In the study patients with CHF were randomized to 4 weeks of treatment with either simvastatin (10 mg, once daily) or ezetimibe (10 mg, once daily). They observed that both simvastatin and ezetimibe reduced low-density lipid cholesterol by approximately 15%; however, the flow dependent dilation (FDD) was markedly improved after simvastatin compared to baseline, whereas there was no significant change after ezetimibe administration. They also obtained that simvastatin significantly increased the activity of extracellular superoxide dismutase, an important antioxidant, and increased the number of functionally active endothelial progenitor cells, while ezetimibe had no effect in either of these areas.

Dr. Stephen Anker (London, UK) presented the lecture entitled *The purpose of statin therapy in CHF*. He agreed with his predecessor that statin therapy has a different function in the management of CHF. He emphasized that the aim of treatment is not to lower cholesterol.

As the last lecturer appeared Prof. Kjekshus from Oslo. He added that, despite the established understanding that low cholesterol is associated with a poor prognosis in CHF, such patients benefit from statin therapy. Statins target 3-hydroxy-3-methyl glutaryl CoA (HMGCoA) reductase, therefore they may

also inhibit multiple metabolic effects of this enzyme. He noted that some of this drug class's benefits could be the reduction of cholesterol plaques and inhibition of the pro-inflammatory effects produced by HMGCoA reductase. Next he presented several trials which showed the role of statins in patients in CHF. He mentioned the beneficial role of statins in inhibiting of co-enzyme Q10 (CoQ10), which further promotes the production of high density-lipid (HDL) cholesterol. At the end of his presentation he showed the outcomes of his own research, where in over 4400 patients with coronary artery disease (CAD) with no history of CHF simvastatin was administered. He observed that patients who received statin were less likely to develop CHF.

All participants of the workshop emphasized that there is still much work to show the real role of statins in heart failure, however one is unquestionable – the role of statins in CHF patients is significantly beneficial.

During *Heart Failure 2005* Dr. Banach and Dr. Okoński presented two manuscripts. In the first one, which was presented during the session *Mechanical intervention for the treatment of heart failure* (Chairmen: Dr. Pacher from Hagenbrunn, Austria and Dr. De Sousa from Lisbon), our aim was to evaluate the early and long-term changes of: ejection fraction (EF), endsystolic and enddiastolic left ventricle diameters (LVESD and LVEDD), endsystolic and enddiastolic left ventricular wall thickness and left atrium diameter, in patients undergoing aortic valve replacement (AVR) due to isolated aortic stenosis (AS) or regurgitation (AR). According to the obtained results we concluded that AVR both due to AS and AR is associated with improved functional status in early (7-21 days) postoperative period especially in groups with EF <50%. We observed an early improvement of analyzing haemodynamic parameters, but the greatest corrections were ascertained for patients subjected to AVR due to AR. Primary long-term results show that the highest benefits are observed in patients with lowest EF; comparing patients subjected to AVR due to AS or AR available data showed the greatest postoperative improvement of haemodynamic parameters in patients with AS.

In the second presentation (Poster session: *Atrial fibrillation*) – *Risk factors of atrial fibrillation after coronary artery bypass grafting* – we evaluated the risks factors of AF occurrence in the postoperative period of cardiac surgery. Of the 1200 patients included to the study, postoperative AF developed in 278 patients (23.2%). According to statistical analysis, factors associated with atrial fibrillation were: preoperative heart failure, age >70 years, preexisting cardiovascular disease, previous treatment by calcium-channel blockers, pulmonary congestion and respiratory insufficiency in the postoperative period and operation with standard CABG (*Coronary Artery*

Bypass Grafting) technique. AF in the postoperative period was associated with an increase in the length of hospital stay (12.9 ± 7.8 vs 9.4 ± 5.2 days, $p < 0.001$) and a greater incidence of stroke or postoperative death ($p < 0.02$). Patients with AF received significantly more fluids and catecholamines and experienced more sepsis, shock, and acute renal failure. Multivariate analysis identified five independent predictors of AF: advanced age, history of supraventricular arrhythmias, heart failure and previous treatment by calcium-channel blockers and operation with standard CABG. The use of beta-blockers and operation with OPCAB (*Off-pump Coronary Artery Bypass*) technique were identified as protective factors.

We have to add a few words about two Young Investigators' Awards during Heart Failure 2005. Competitions were organised to select the best original contributions in basic and in clinical science. The winner of Basic Science was Adam Jacques for the study entitled: Alterations in troponin I phosphorylation could account for the contractile defect in failing heart and the winner of Clinical Science was Annette Gijbers for the study to the point of: *Changes in the myocardial basement membranes after Left Ventricular Assist Device support*.

We hope these examples stimulate our young readers to work hard to achieve such or even greater results.

EUROPACE 2005

The meeting in Prague (26-29 June 2005) was a highlight for European arrhythmologists. Much over 3500 participants took part in this event, and 952 abstracts were submitted for the review process.

European Heart Rhythm Association (EHRA) is a young and vital Association that, in the first eighteen months of its life, under the Presidency of Prof. Lukas Kappenberger, has become the leader in the education in the field of cardiac arrhythmias in Europe, as was demonstrated by a very successful EUROPACE meeting held past June in Prague. A new EHRA President for the next two years became Prof. Silvia G. Priori from Pavia, Italy. Under her leadership, with the Executive Board – Prof. Joseph Brugada, Prof. Panos Vardas, Prof. Harry Crijns, and Prof. Richard Sutton – EHRA will continue its commitments inter alia to become the leading professional society in setting the standard of care for patients with arrhythmias, to promote clinical and basic science in arrhythmias and improve patient care in the field of arrhythmia management.

Europace 2005 was the cardiologic conference which took place in the one of the most beautiful European capitals – in Prague. During the Congress there were many interesting sessions, oral presentations and posters. In our opinion the most important ones were connected with the role of ablation in the treatment of atrial fibrillation (AF).

We have also presented the study in which we evaluated the intraoperative ablation system Cardioablate in patients with atrial fibrillation undergoing mitral valve replacement. According to the obtained results we concluded that this kind of ablation in patients with atrial fibrillation treated due to mitral defect is a safe and in most cases effective (85.7%) method in the treatment of existing arrhythmias.

One of the most important complications following cardiac surgery is atrial fibrillation and flutter (AFL). In the study entitled: *Risk factors of supraventricular arrhythmias before and after surgical closure of atrial septal defect (ASD t.2) in adults (during oral session: Atrial fibrillation and the cardiac surgeon*. Chairmen: Prof. Nabih from Cairo and Prof. Hemmer from Stuttgart) – we wanted to find the factors which may predict the incidence of AF after surgical correction of ASD t.2. 98 patients (mean age 43.8 ± 11 years) who were operated on isolated ASD t.2 were included to the study. Mean age in the time of surgery was 37 ± 12 years. Follow-up studies were performed 2-11 years after operation; average 6.6 ± 3.1 years. Patients were divided into two groups according to presence of AF/AFL before and after surgery. Group AF(+) consisted of 34 (34.7%) and group AF(-) of 64 patients (65.3%). In all patients echocardiography, electrocardiogram (ECG) at rest and P-wave signal averaging potential in SAECG (*signal averaged ECG*) were performed. In echocardiography we assessed: value of pulmonary artery systolic pressure (PASP), left and right atrial (LA, RA) diameters, diameter of right ventricle (RV), value of tricuspid insufficiency (IT), value of mitral insufficiency (IM). In ECG we assessed P wave duration. AF was observed in 27 patients (27.5%) before surgery and in 34 (34.7%) following surgery. Considering all potential risk factors which may predispose to the occurrence of AF incidence after operation we included: age before and after operation, value of PASP, LA, RA and RV diameters, value of IT and IM, P wave duration in ECG, PWD in SAECG. We concluded that the frequency of occurring AF did not decrease after ASD t.2 operation. It seems that value PWD >130 ms is nondependent factor which may predict the incidence of AF with 93.1% sensitivity after surgical closure of ASD t.2.

Summing it up these two great conferences were a great opportunity to take part in many worthy workshop, listen to many high quality presentations, and meet and talk to famous, experienced researchers. Such occasions give the opportunity to exchange our own opinions and discuss. And it always favors with creating new great scientific ideas.