Chronic heart failure with right ventricular dysfunction: the effect of bisoprolol on right ventricular function

Samia Benghazi, Nouhad Jardi, Rachida Habbal

CHU Ibn Rochd, Cardiologie, Casablanca, Maroc

Introduction: Beta blockers have proven benefit in the treatment of chronic heart failure. In CIBIS II, the total mortality and the risk of sudden death were reduced in patients treated with Bisoprolol compared to placebo respectively 11.8% vs. 17.3%, p<0.001 and 3.6 vs 6.3%, p<0.02 regardless of age, NYHA class and co-morbidities. In our study a similar effect of Bisoprolol in chronic heart failure with right ventricular dysfunction is proposed.

Material and methods: This study examined the short-term effect of Bisoprolol on right ventricular function in patients with chronic heart failure with right ventricular dysfunction. A cohort of 60 patients with chronic heart failure with right ventricular dysfunction who were not taking beta-blockers has been previously studied prospectively. The RVEF and LVEF were measured at baseline and followed for 6 months by Doppler echocardiography. Various parameters of the right ventricular function were measured: RVEF, fractional shortening surface, TAPS, Doppler tissue S’DTRICUSPID ring and RV Tei index. The significance level was set at 5%. The maximum dose of Bisoprolol was titrated during four monthly visits by a preestablished protocol to a target dose of 10mg / day.

Results: The average age of participants was 65.7±16.3 years, RVEF at 6 months was 25.6±5.2 and the baseline was 20.8±6.4. The maximum dose of Bisoprolol was 5.7±3.7mg / day. At 6 months the RVEF increased significantly from 7.9% (confidence interval 95%, 0.3-10.02%, p<0.0001) and left ventricular ejection fraction also increased significantly from 7.5% (range 95% confidence, 4.0-11.9%, p<0.0003). All parameters of right ventricular function were significantly improved.

Conclusion: Treatment with Bisoprolol in chronic heart failure with right ventricular dysfunction at 6 months resulted in a significant improvement in right ventricular ejection fraction, which in parallel with the improvement of left ventricular ejection fraction.

Use of an intraaoratic balloon counter-pulsation as a means of preventing pulmonary edema in patients with laminar flow under peripheral venous-arterial extra-corporale life support

Pierre Demondon (1), Nicolas Bréchot (2), Guillaume Lebreton (1), Charles Edouard Luyt (2), Jean Louis Trouillet (2), Ania Nieszkowska (2), Pierre Demondion (1), Nicolas Bréchot (2), Guillaume Lebreton (1), Jean René Lusson (1), Romain Eschalier (1)

(1) CHU Gabriel Montpied, Cardiologie, Clermont Ferrand, France – (2) CHU Gabriel Montpied, Pharmacologie, Clermont Ferrand, France – (3) CHU Gabriel Montpied, Bistomatistque (DRCI), Clermont Ferrand, France

Aims: Part of over 80-year-old heart failure (HF) patients is increasing. These patients are poorly studied. The present study undertook a ‘real-life’ analysis of various aspects of the prognosis of over 80-year-old HF patients in France.

Methods and results: Analysis was based on the EGB (“Echantillon Généraliste des Bénéficiaires”) database, a continuously updated representative sample of the population covered by the French national health insurance system. A cohort of adult patients with a first admission for HF was created between 2009 and 2011 and followed until June 2013 for survival analysis. Over 80-year-old patients represented 53% (n=969/1825) of hospitalizations for HF. In octogenarians, in-hospital mortality was 10.9% [9.6-12.2] and mean 12 –, and 24-months survival 62.3% (range, 59.1-65.4) and 48.2% [44.8-51.5]. Only prescription levels for beta-blockers (BB) (p=0.02) increased during the follow-up period. Only 5% of patients received at discharge an optimal treatment (association of angiotensin converting enzyme inhibitors/angiotensin receptor blockers (ACEi/ARB) +BB+mineralocorticoid receptor antagonists (MRA)). During this period there was no increase of ACEi and ACEi/ARB+BB+MRA prescription at discharge (p=0.48 and p=0.87, respectively). On multivariate analysis, atrial fibrillation [HR: 0.77(0.65-0.91), p=0.003], female gender [0.80(0.67-0.95), p=0.01] and the associations ACEi/ARB+BB+MRA [0.49(0.29-0.85), p=0.01] and ACEi/ARB+BB [0.54(0.43-0.68), p<0.001] were associated with improved survival, in contrast to demutrition [1.64(1.27-2.13), p<0.001] and cardiogenic shock at admission [3.11(1.78-5.46), p<0.001].

Conclusion: Octogenarians HF patients are poorly managed and treated according to international guidelines despite the clinical benefit of such drugs confirmed in this un-selected cohort with several comorbidities.