098

Mid-term follow up of consecutive patients with cardiogenic shock without acute coronary syndrome

Jean-Christophe Charniot (1), Jean-Paul Albertini (1), Claudine Cosson (2), Franck Chemouni (1), Noelle Vignat (1), Vera Bogdanova (1), Rachid Kidouche (1), Jean-Jacques Monsuez (3), Jean-Yves Artigou (1)
(1) Hôpital Avicenne, Cardiologie, Bobigny, France – (2) hopital Bicetre, Kremlin Bicetre, France – (3) Hopital René Muret, Sevran, France

Pronostic of cardiogenic shock (CS) is severe and mortality is still more than 50%.

Aim of the study: Prospective study of patients consecutively hospitalized for a first CS due to cardiomyopathy (CM) with LV dysfunction and a 18-month period of follow-up.

Inclusion criteria: CS is defined by systolic BP<80mmHg or hemodynamic support with peripheral hypoperfusion. All patients had echocardiography, coronarography and biological evaluation (troponine and NTproBNP). Regular follow-up was realized at 1, 3 and 6 months using echocardiography, stress test with oxygen consumption and therapeutic adaptation (βblockers).

Exclusion criteria: acute coronary syndrome, septic, anaphylactic, hypovolemic shock.

Results: 24 patients (90% men) mean age 57,5±11,2 y were included; 8 ischemic CM, 15 dilated CM [11 idiopathic, 3 toxic (alcohol n=4 ; iatrogene n=1), 1 myocarditis] et 1 restrictive CM (haemochromatose). Cardiovascular risks were diabetes with HbA1c > 8% (n=11), HBP (n=7), tabacco (n=9), dyslipidemia (n=8). Upon admission NT proBNP value was 5025ng/mL and 1730ng/ml 8 weeks later. The mean LVEF was initially 23±8% and 39,5±13,7% at the end of the follow up. The duration of hospitalisation was 12±15 days.

	initial	6 mois	18 mois
NYHA IV Stage (%)	100	20	18
LBBB(%)	46		
Creatininemia (umol/l)	150 ± 100	130 ± 50	127 ± 42
LVEF%	24 ± 9%	30 ± 8%	39,5± 13,7
LVEDD (mm)	64±9	62 ± 10	61± 20,3
SPAP (mmHg)	50±14	49 ± 10	30 ± 9,4
NT pro BNP (ng/ml)	5025±8200	3800±6200	1730 ± 4200

At the end of the follow up, in 6 patients heart failure symptoms decreased and 3 patients normalized their LVEF. 3 patients alone had a βblocker treatment, 2 resynchronisations, and with DAI for 1 patient and 2 transplantations. 3 patients died due to cardiogenic complications (all with an ischemic cardiomyopathy) and 7 patients had iterative hospitalisation for heart failure.

Conclusion: The pronostic of cardiogenic shock without acute coronary syndrome is better with the improvement of therapeutic methods but, in this study the severity was important: death = 12.5%, morbidity = 31.2%.

January 16th, Saturday 2010

099

Effects of Reduced Inspired Oxygen Concentration in Patients with Chronic Heart Failure

Thibaud Damy (1), James Hobkrik (2), Anna Bennet (2), S Ingle (2), Andrew Clark (2), Jean-Luc Dubois-Rande (1), Luc Hittinger (1), John Gf Cleland (2)
(1) CHU Henri Mondor, Fédération de Cardiologie, Créteil, France – (2) NHS trust East Yorkshire, Academic Cardiology, Cottingham, Royaume-Uni

Purpose: In healthy individuals, reducing inspired oxygen concentrations to 15% (equivalent to an altitude of ~2500 metres or usual aircraft cabin pressure) causes an increase in heart rate (HR), left ventricular ejection fraction (LVEF) and pulmonary arterial pressure (PAP). The clinical and haemodynamic responses to hypoxia (15% oxygen) have not been reported in patients with chronic heart failure (CHF).

Methods: Patients with CHF were enrolled who met at least one of the following criteria: NYHA≥III, LVEF <40%, or diuretic dose equivalent to furosemide ≥ 80mg. Patients inspired 15% oxygen from a Douglas bag through a mouthpiece whilst lying supine. Clinical and echocardiographic measurements were performed at baseline and after one hour of hypoxia.

Results: Thirty two CHF patients (mean age and LVEF were 63±13yrs and 33±9% respectively) were recruited. 70% had ischemic heart disease and 22% had permanent atrial fibrillation. Hypoxia was well tolerated and was not associated with worsening HF-symptoms. Arterial oxygen saturation (SpO2) decreased from 97.2±1.2 to 85.7±5.0%, p<0.0001. Mean systemic blood pressure (MSBP) increased from 84±11mmHg to 92±11mmHg, p<0.0001, whilst HR remained unchanged at 69±14bpm. LVEF and E/A ratio were unchanged. Diastolic LV function tended to improved (E/Ea from 13.6±7.2 to 12.3±7.7 p=0.09). Systolic PAP increased (from 34±9mmHg to 38±9mmHg, p<0.05 in n=16 patients with tricuspid regurgitation) and the right ventricular systolic function assessed by the tricuspid annular systolic excursion was unchanged.

Conclusion: Hypoxia caused no symptoms in any patients despite a significant increase in MSBP and a decrease in arterial SpO2. Further investigations in a larger patient group and with longer periods of hypoxia are being conducted.

100

Renal dysfunction and use of angiotensin-converting enzyme inhibitors and angiotensin receptor blockers in chronic heart failure

Michel Galinier (1), Nacima Demil (2), Patrick Assyag (3), Pascal De Groote (4), Richard Isnard (5), Guillaume Jondeau (6), Alain Ducardonnet (7), Jean-François Thébaut (8), Michel Komajda (5)
(1) Faculté de Médecine Toulouse-Rangueil, Service Cardiologie, Toulouse, France – (2) astrazeneca, Rueil Malmaison, France – (3) Hôpital Saint Antoine, Service Cardiologie, Paris, France – (4) Pôle cardiologie et maladie vasculaires, Hôpital cardiologique, Lille, France – (5) Hôpital Pitié Salpétrière, Département de cardiologie, Paris, France – (6) Hôpital Bichat, Service Cardiologie, Paris, France – (7) Institut coeur effort santé, Paris, France – (8) Centre cardiologique Alfred Kastler, Sarcelles, France

Background: European Guidelines for the treatment of CHF 2008 underline that there is no absolute level of creatinine which precludes the use of angiotensin converting enzyme inhibitors (ACE-Is) or angiotensin receptor blocker (ARBs).

Aims: The IMPACT-RECO program III analysed the impact of NYHA class and of comorbidities on therapeutic management of French outpatients with stable CHF and low left ventricular ejection fraction (LVEF).

Methods: This survey was carried on 2007 among randomly selected French private cardiologists. 1574 patients with CHF and LVEF < 40% were included.

Results: Mean age was 71 ± 11 years, 75% of the patients were men, 34% were in NYHA class III-IV, 54% had coronary artery diseases, 30% had atrial fibrillation and the mean LVEF was 34 ± 7%. Creatinine value was recorded in 1332 patients. Mean creatinine concentration was 119 ± 50 µmol/L and mean creatinine clearance was 59.6 ± 26.8 ml/kg/min. Renal dysfunction defined by creatinine concentration > 220 µmol/L or 25 mg/dL was found in 173 patients. In the 467 patients not receiving ACEIs, reasons for non prescription were firstly contra-indication in 69 patients (14.8%) mostly because of renal dysfunction in 54 patients (78.3%), secondly side effects in 365 patients (78.2%) with renal insufficiency found in 25 patients (6.85%). In 1033 patients, ARBs was also not prescribed because of contra-indication for renal dysfunction in 79 patients (90.8%), or intolerance with renal insufficiency in 40 patients (32.8%). Thus, despite a mean creatinine clearance of 33.3 ± 15.1 mL/kg/min in 173 patients with renal dysfunction, ACEIs/ARB were not prescribed in 133 patients considering renal dysfunction as a contra-indication.

Conclusion: Renal dysfunction remains the main reason for not prescribing ACEIs/ARBs in CHF despite the possibility to easily adapt their dose to creatinine clearance. Improvement is still necessary so that ACEIs/ARBs should not be denied to CHF patients with concomitant renal dysfunction.