

Topic 11 – Surgery

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0003

Results of the cardiac surgery programmed among patients having a morbid obesity (IMC>40)

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Objectives: The increasing proportion of obese patients candidates for a cardiac surgery obliges us to reflect on the périopératoire risk this population in order to direct with better our assumption of responsibility.

We studied the results of the cardiac surgery for the obese patients presenting an index of body mass (IMC) >40.

Methods: Retrospective study on a prospective basis of data of 3564 patients operated in surgery programmed between 2004 and 2012. The population was divided into three groups: I (n=2494): 20 <IMC <29,9; II (n=1014): 30 < IMC < 39,9 and III (n=56): IMC ≥40. The IMC < 20 were excluded because of a surmortality brought back in the literature. The principal criterion of judgement was mortality at 90 days. An analysis of multivariate regression was carried out in order to identify the prognostic factors of mortality. A comparative study of the principal postoperative complications was carried out.

Results: Mortality at 90 days was 4,1% in group I, 3,7% in group II and of 0% in group III (p NS). In group III, the average age was younger: 57,2±8,2 years vs 68,4±10,7 years (group I) and 64,9±9,8 (group II) (p<0,05). 58,2% and 27,7% of the patients had respectively a coronary or valvular surgery isolated, 9,7% a valvular and coronary combined surgery and 4,4% a different gesture. The rates of parietal surgical recoveries or médiastinites were comparable (group I: 2,6% N = 64; group II: 5,3% N = 54; group III: 5,4% N=3) (p NS). In multivariate analysis, the factors influencing mortality were the age > 60 years and the transfusion of globular bases. The BMI > 40 did not influence mortality.

Conclusion: Programmed cardiac surgery carried out among patients presenting one IMC > 40 does not seem to be accompanied by an increase by mortality and morbidity périopératoire. This population was younger in our experiment, probably minimizing the postoperative rate of complications. Despite everything, the IMC taken separately should not be a criterion of surgical counter-indication.

Key words: Comorbidity, Obesity, Surgery, Cardiac.

0247

Mitral valve surgery complicated by circumflex artery: a rare but serious complication

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Background: Circumflex coronary artery (CCA) injury during mitral valve surgery is a rare but serious complication with difficult diagnosis. The aim of our study was to describe the elements of diagnosis that could allow prevention of this complication.

Method and results: From 2006 to 2013 in Rouen University Hospital, 8 patients (1.03%) among 775 undergoing mitral valve surgery (repair or replacement) presented CCA occlusion confirmed by coronary angiography. Sex ratio was 5 men for 3 women with a mean age of 54.2 years. Left main coronary dominance was present in 75%. Mitral valve repair was performed in 5 patients and valve replacement in 3. The diagnosis was suspected by ECG in 7/8 patients: 6 patients (75%) presented ST segment elevation, 1 had permanent AV block while EKG was normal

in one. CCA occlusion led to a significant impairment of left ventricular function, median LVEF: decreased from 58 to 43% (p=0.04) although coronary angiography was performed within one hour in 5 patients (62.5%). Five had complete revascularization (4 of those with immediate coronary angiography), while 3 were treated medically. Occlusion, assessed by coronary angiography, was preferentially located on the superolateral quarter of the mitral annulus next to the anterolateral commissure predominantly on its mid portion (75%). As regards to the mechanism of CCA occlusion, 37.5% of patients had a stitch passing through the CCA, 50% had a kinking of the vessel due to a stitch located close to the CCA and one of them had a compressive hematoma. Follow-up at day-7 was uneventful in 7 patients with one in-hospital death one day after the surgery (cardiac tamponade).

Conclusion: CCA injury is a rare but serious complication of mitral valve surgery suspected on ECG, due to a stitch always located at the same point of mitral annulus. An eventual intraoperative angiography in hybrid rooms could be a specific solution for patients at risk (large mitral ring, left main coronary dominance).

0403

One-year survival among patients supported with a ventricular assist device: results of the hospital of Montpellier about 29 implantations

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Ventricular assist devices (VADs) are used to bridge the patient with end-stage heart failure to cardiac transplantation (BTT) or to destination therapy (DT).

Since 2003 in the Montpellier's hospital, 29 VADs have been implanted (8 to DT). In the majority of cases, the VAD was used in acute end-stage of heart failure; one-year mortality was 45%.

Unlike inotropic agents, levosimendan, a new calcium sensitizer, enhances myocardial contractility without increasing myocardial oxygen consumption.

15 out of 29 patients were on the Intermacs classification level I, on a scale of 1 to 7, 9 received levosimendan and 6 did not.

9 of 29 patients were undergoing to levosimendan infusion to prevent right ventricular failure; 5 were under mechanical ventilation and 5 under Extracorporeal membran oxygenation (ECMO) or trans-aortic left ventricular discharge by Impella 5.0 (Abiomed) before LVAD. 7 out of 29 patients (77.8%) were alive one year later, among who one died from cancer. 2 patients were under ECMO after LVAD.

In contrast, only 6 patients out of 29 patients (20,7%) without levosimendan are alive after one year.

Multivariate analysis demonstrated a significant independent effect of levosimendan infusion on one year mortality in this retrospective study.

0454

Prognosis impact of ventricular dysfunction in patients with acute coronary syndrome undergoing surgical revascularization

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Background: Patients with non-ST elevation acute coronary syndrome complicated by left ventricular dysfunction are a poor prognosis. The aims of our study were to describe the use of surgical revascularization in these high risk patients and to assess the impact of left ventricular dysfunction on long term outcomes.

Methods: Between 1996 and 2008, we performed elective, isolated, primary CABG in 206 consecutive patients with LVEF≤0.40 complicating acute

coronary syndrome. The case group was compared with a group of controls randomly selected (2:1) among the patients who underwent the procedure during this period.

Results: The analysis of in-hospital course showed a significantly greater all-cause mortality (14.1% vs 7.3%, $p<0.01$) and cardiovascular mortality (12.7% vs 6.1% $p<0.005$) in the low LVEF group. Early postoperative morbidity including myocardial infarction (2.9% vs 3.4% $p=ns$), stroke (2.9% vs 1.5%, $p=ns$), digestive ischemia (1% vs 2.2%, $p=ns$) and mediastinitis (2.4% vs 1.9%, $p=ns$) was similar in two groups whereas acute renal failure (22.1%

vs 14.9%, $p=0.03$) was significantly higher in low LVEF group. Differences in outcomes remained significant after adjusting all variables, low LVEF $<40\%$ appeared as an independent predictive factor of all-cause mortality (HR= 3.2 (95% confidence interval 1.8 to 5.7, $p<0.001$).

Conclusion: Surgical revascularization in patients with left ventricular dysfunction complicating acute coronary syndrome is associated with a very high risk of subsequent adverse outcomes and continuing efforts to improve care for these high risk patients are particularly important in terms of diagnosis, revascularization strategy and secondary prevention