

059

Economic evaluation of the French subset of the SYNTAX trial at 1 year: drug-eluting stents compared with bypass surgery for patients with 3-vessel and/or left main coronary artery disease

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Background: SYNTAX is a randomized controlled trial comparing percutaneous coronary intervention (PCI) using drug-eluting stents with coronary artery bypass graft surgery (CABG) in patients (pts) with 3 vessel and/or left main disease. We will analyze health economic data associated with CABG and PCI in the subset of France compared with select countries in the EU (Germany, Italy and UK).

Methods: Costs will be estimated using 1-year resource utilization data including procedural resource use (stents, guidewires etc.), hospitalizations major procedures and work days lost. Estimates are based on French patterns of resource utilization, number of hospital days and break down of those in intensive care, or ward days. Where data did not allow reliable French estimate, a Bayesian statistical model was applied combining the observed resource utilization with priors based on data on less rare events. Effects are measured in terms of MACCE-free survival.

Results: In France, 105 pts were randomized to CABG and 103 to PCI in the SYNTAX trial. There were 156 hospitalizations in the first year in CABG pts compared with 139 in PCI pts. Overall, CABG pts in France spent 23.3 days (d) in hospital (see Table). PCI pts spent 9.2 d in hospital. After the index procedure, pts in the CABG arm spent 9.1 d in hospital whereas PCI pts spent 5.7 d. Economic data comparing short- and long-term medical care costs for pts with left main and/or 3-vessel CAD treated with either DES or CABG will be available at time of presentation.

Conclusions: Additional analyses of the procedural resources utilized and costs associated with the procedures will be presented as a comparison between the French subset and countries in the EU.

	Mean Total Days in Hospital Per Patient ^a		Mean Days in Hospital During Follow-up	
	CABG	PCI	CABG	PCI
Intensive Care Unit (ICU)	8.8	4.3	1.8	1.3
General Ward	10.7	3.7	6.7	4.2
Other Wards	2.5	0.9	0.6	0.2
Total Days	23.3	9.2	9.1	5.7

^aTotal days in hospital includes days spent during index procedure

060

Plasma aldosterone levels predict long-term clinical outcome after percutaneous coronary revascularization

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The renin-angiotensin-aldosterone system is a major therapeutic target in coronary artery disease (CAD). Recent data suggest that plasma aldosterone has a high prognostic value in acute coronary syndrome (ACS). We tested whether plasma aldosterone could predict clinical outcome in patients undergoing scheduled percutaneous coronary revascularization (PCR). Methods: From June 2001 to September 2002, we included all consecutive patients referred to Lille's University Hospital for scheduled PCR. Blood samples were taken during the PCR. The primary endpoint was cardiac death throughout at least 12 months of follow-up. Results: 807 patients were included, with a mean age of 61 years. Most were men (78%), smokers (71%). 32% were diabetics, mean LVEF was 58±15% and 93% received stents. 50% had stable angina. The mean plasma aldosterone level was 25(13-45)pg/mL. BMI (p=0.003), NYHA class>1 (p=0.0001) and elevated baseline troponine (p=0.01) were associated with increased aldosterone level. Old age (p=0.0001), normal GFR (p=0.01) and betablockers (p=0.01) were associated with decreased aldosterone level. The mean follow-up was 14.9 months and there were 40 cardiac deaths during this period. In multivariate analysis, old age (HR=1.42, p=0.04), low LVEF (HR=1.58, p=0.001), diabetes mellitus (HR=2.2, p=0.04), a recent history of ACS (HR=3.23, p=0.02), high usCRP (HR=2.59, p=0.004) and high plasma aldosterone (HR=3.48, p=0.004) were independent predictors of cardiac mortality. Conclusion: Plasma aldosterone level seems to have an independent prognostic value in patients referred for PCR and could be useful in determining the individual cardiovascular risk. Whether this is the result of direct deleterious effects (promotion of endothelial dysfunction, pro-fibrotic, pro-inflammatory and pro-thrombotic effects) or the marker of a global activation of the neuroendocrine system remains to be determined. However plasma aldosterone appears to be an attractive risk marker in CAD.

Overall survival by plasma aldosterone level

Survival

Follow-up time in months

2.5%

Aldosterone ≤ 25 pg/ml

Aldosterone > 25 pg/ml

8.2%

061

Thrombectomy in Primary Percutaneous Coronary Intervention for Acute ST-Segment Elevation Myocardial Infarction. Observational data From the RICO Survey

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Objectives: The use of adjunctive thrombectomy (AT) as device to primary percutaneous coronary intervention (PCI) for an acute ST segment elevation myocardial infarction (STEMI) has shown clinical benefit in randomized trials. Whether this benefit could translate to all patients with partial or complete occlusion of a coronary artery in primary PCI remains to be determined.

Methods: From the RICO Survey, all the patients admitted with TIMI grade 0 or 1 before primary PCI for a STEMI < 12 H after symptom onset were included in the study. Among the study population, 156 (29%) patients underwent AT (AT group) and were compared with patients with TIMI grade 0/1 who do not undergo AT (control group, n=384).