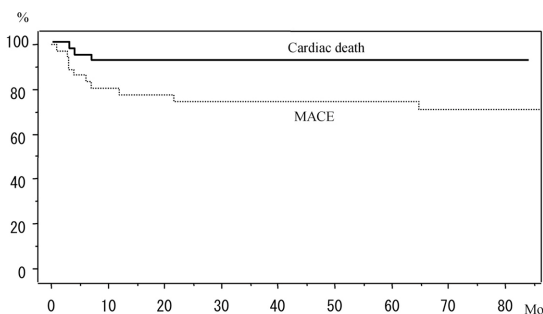


death at 7-year was 91% (94% in GC group, 88% in PC group), and free from MACE (cardiac death/ CABG/ myocardial infarction/ TLR) was 71% (81% in GC group, 62% in PC group).

Conclusion) Bare metal coronary stent treatment for unprotected LMCA stenosis had a favorable longer-term follow up result, particularly in low CABG risk group.



1081-59

Target Vessel Revascularization During the First Month After Bare Metal Coronary Stenting: Clinical Indications and Angiographic Findings

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Background: Patients who undergo target vessel revascularization (TVR) during the first 4 weeks after coronary stenting are assumed to have subacute stent thrombosis (SAT). However, other factors may account for TVR during this period. We studied the angiographic findings and clinical indications for TVR within the first month after coronary stenting.

Methods: We reviewed the clinical and angiographic data of all patients who underwent TVR within the first month after coronary stenting at our hospital between February 1995 and July 2003. Vein graft interventions were excluded.

Results: Of the 21,433 patients who underwent coronary stenting, 266 (1.24%) had TVR within the first month. Clinical indications and angiographic findings are shown in table 1. The majority of patients presented as ST elevation MI or unstable angina. SAT was seen in 41% of patients, 24% had edge dissection, while 33% had untreated or new significant lesions. Patients with AMI and hemodynamic compromise were more likely to have SAT, whereas patients who presented with unstable angina or positive myocardial perfusion imaging (MPI) were more likely to have a significant untreated or new lesion.

Conclusions: SAT accounts for less than half the number of TVR within the first month. Patients with SAT usually present with AMI or hemodynamic compromise. Edge dissections are infrequently found. Patients with unstable angina usually have new or untreated lesions, which may be due to trauma to the target vessel during index intervention.

| Clinical Indications | Angiographic Findings* | | | |
|-------------------------------|------------------------|---------------------|---|-----------|
| | SAT (%) | Edge Dissection (%) | Significant untreated or new lesion (%) | Other (%) |
| AMI (n=107) | 78 | 21 | 22 | 6 |
| Hemodynamic Compromise (n=47) | 70 | 23 | 45 | 6 |
| Unstable angina (n=104) | 16 | 30 | 47 | 14 |
| Positive MPI (n=11) | 9 | 27 | 73 | 18 |
| Elective re-look (n=17) | 0 | 24 | 94 | 12 |

1081-60

High Rate of In-Stent Thrombosis in Cocaine Users Undergoing Coronary Stent Placement

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Introduction: Cocaine use has been associated with premature coronary artery disease and myocardial infarction. Percutaneous revascularization and intracoronary stenting is commonly performed in patients who actively use cocaine and have obstructive coronary artery disease. The in-stent thrombosis rate in patients who undergo coronary stent implantation and actively use cocaine is not known.

Methods: We reviewed all patients who underwent stent placement over an 18-month period from 2002-2003 at an inner-city county hospital and identified patients with active cocaine use, defined as a history of recent cocaine use or a positive toxicology screen for cocaine. Angiograms of the patients who underwent repeat coronary angiography for suspected myocardial ischemia or infarction were evaluated for stent thrombosis.

Results: Of a total of 247 patients who underwent coronary stent placement, 12 (4.9%) were active cocaine users. All patients were prescribed standard dual antiplatelet therapy after the index percutaneous revascularization procedure. Of these 12 patients, four (33%) patients (mean age 55±8 years) presented with an acute myocardial infarction at a mean of 51±40 days after the index revascularization procedure (average initial stent diameter 2.88±0.14mm, and mean stent length 17.8±11 mm). Angiography confirmed

in-stent thrombosis and all of them underwent successful repeat percutaneous revascularization.

Conclusions: Stent thrombosis in the modern era has been reported to be less than 1% with dual anti-platelet therapy. We found a markedly higher (33%) incidence of thrombosis in patients who actively use cocaine and undergo percutaneous revascularization. High rate of in-stent thrombosis in cocaine users may be due to a deleterious effect of cocaine on the coronary endothelium impairing adequate stent endothelialization, enhanced platelet aggregation and potential non-compliance with antiplatelet therapy. Patients with active cocaine use who undergo coronary stenting warrant vigilant post-procedure follow-up and enrollment in a structured substance abuse program.

1081-61

Arterial Retroperfusion by a Percutaneous Stent-Based Ventricle to Coronary Vein Bypass (VVPASS™)

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Background: Arterialization of coronary veins is a potential treatment modality in no option patients. Chronic arterialization of coronary veins, however, is associated with an increase of coronary venous pressure which might be complicated by hemorrhagic infarction. A stent-based ventricle to vein bypass (VPASS™) is an attractive new approach to chronic venous arterialization trying to avoid chronic pressure overload due to passive diastolic drainage of the vein after systolic retroperfusion. In this study, the efficacy of vVPASS™ was compared to catheter-based pressure-regulated arterial retroinfusion previously shown to maximize preservation of regional myocardial function during acute ischemia.

Methods: In 8 pigs a retroinfusion catheter was placed in the anterior cardiac vein. Regional myocardial function (sonomicrometry) was determined during LAD occlusion with and without support by pressure-regulated retroinfusion. Thereafter, vVPASS™ was established using a percutaneous ultrasound-guided puncture from the anterior cardiac vein to the left ventricle with subsequent implantation of a ePTFE covered stent graft.

Results: After balloon occlusion of the LAD and of the proximal anterior cardiac vein, venous pressure in the distal anterior cardiac vein increased to 70±2 mmHg (systolic) resp. 58±2 mmHg (mean) compared to 57±3 mmHg resp. 50±2 mmHg during pressure-regulated retroinfusion. Significant preservation of subendocardial segment shortening (%baseline) was observed after vVPASS™ (66±10%) and during selective retroinfusion (71±7%) compared to control LAD occlusion (5±5%). **Conclusion:** Percutaneous implantation of a PTFE covered stent (vVPASS™) was feasible and associated with significant preservation of regional myocardial function during acute ischemia in pigs at reasonable levels of mean coronary venous pressure to avoid tissue damage during chronic application.

1081-62

Potential Impact of Frame Bias Upon Quantitative Coronary Angiographic Outcomes in Coronary Stent Trials

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Background: Study the effects of biased frame selection upon the outcomes from quantitative coronary angiography (QCA) in acute and follow-up stent evaluation.

Methods: 39 patients with single vessel stenting and follow-up angiogram at 6 months were studied using the CMS Medis QCA system. Three different stent types [A (n=13), B (n=13), C (n=13)] were compared. Stent groups were similar with respect to demographics and lesion profile. The acute and follow-up films were read in 3 different ways; 1) frame chosen that makes the stent look most narrowed (Worst); 2) frame chosen that makes the stent look least narrowed (Best) and 3) the mean value from 3 consecutive end-diastolic frames, as read by unbiased core lab technicians (Core). Immediate and follow-up mean % diameter stenosis, binary restenosis rates, and late loss were calculated.

Results: The results from the pooled data from all 39 stents were compared using the Best, Worst and Core lab analysis. Analysis of variance was used to calculate the p values. The results are shown in the table below. * Best vs. Worst p<0.01; § Best or Worst vs. Core p< 0.01; ¥- p< 0.001 for Best of A, B or C, vs. Worst of comparison stents.

Conclusions: Significant alteration of angiographic results can be observed with QCA if operators have a study bias and are given the freedom to choose which angiographic frame to analyse. These findings underscore the importance of an independent and blinded core lab analysis in the interpretation of stent trial results.