883-2 Effect of Stent Implantation and Glycoprotein IIb/IIIa Inhibitor Use on Outcomes Compared to Stenting in Patients Undergoing PCI for Acute Myocardial Infarction: The CADILLAC Trial

Introduction: Patients undergoing percutaneous coronary intervention (PCI) for acute myocardial infarction (AMI) are at risk for restenosis. Stenting and glycoprotein IIb/IIIa inhibitor (GPI) use may reduce restenosis. We compared outcomes of patients undergoing PCI for AMI to primary PCI, PCI with stent, or PCI with stent and abciximab (Abcx).

Methods: In the CADILLAC trial, 2,082 pts with AMI <12 hours in duration underwent PCI. All pts were randomized to primary PTCA, PTCA + Abcx, or stent implantation. Abcx was administered to 5% of pts undergoing stenting in the trial. We pooled clinical, angiographic, and outcomes data on 2537 patients enrolled in the Primary Angioplasty in Myocardial Infarction (PAMI-1), PAMI-2, and Stent PAMI trials. We classified patients into BB group (n=1523) if they received BB before undergoing percutaneous coronary intervention (PCI), or No-BB group (n=1014) if not.

Results: BB pts had more spontaneous patency (baseline TIMI 2-3 flow 30% vs 21%, p<0.0001), they had a lower probability of death during hospitalization (odds ratio, OR=0.41; 95% CI=0.33-0.51), and were more likely to have Killip Class I at admission than no-BB patients. Furthermore, the 6 month rate of ischemic TVR in stented diabetics was similar to that in non diabetics (7.2% vs. 5.9%, p=0.1). The 6 month rate of TVR and MACE was significantly lower in pts achieving optimal PTCA. Thus, in AMI, primary stenting provides better long-term outcomes than optimal PTCA in diabetes independent of Abcx use.

Conclusions: Whereas Abcx may reduce the rate of subacute thrombosis in diabetic pts undergoing primary PCI in AMI, Abcx had no significant effect on clinical restenosis or any TVR. In contrast, a strategy of routine stent implantation significantly reduced TVR rates in DM independent of Abcx use.

Optimal PCI w/out Abcx Opt PCI w/ Abcx
All Optimal PCI All Stent
N 239 279 509 510 1014
Death 4.2% 2.6% 3.3% 4.3% 0.02
Reinfarction 0.6% 2.2% 1.6% 2.0 0.04
Ischemic TVR 13.4% 19.3% 16.5% 7.9%<p<0.001
MACE 17.2% 21.9% 19.7% 13.6%

883-3 Angiographic Determinants of Infarct Size After Successful Percutaneous Intervention for Acute ST-T Elevation Myocardial Infarction: The Impact of Distal Embolization

Introduction: Angiographic variables may predict infarct size and prognosis in patients undergoing PCI. Previously, we demonstrated that distal embolization during primary angioplasty can be visualized in 16% of pts and is associated with a larger enzymatic infarct size and lower LVEF.

Methods: Angiographic data were assessed on the coronary angiogram made immediately after successful coronary angioplasty. Distal embolization was defined as the presence of distal embolization flow grade 4 (TIMI 0-1) with a bail-out stent.

Results: LAD related MI, impaired myocardial blush and presence of distal embolization were independent predictors of more extensive myocardial damage. Distal embolization was present in 102 pts (16%) and was associated with a larger enzymatic infarct size (LDHQ48 2250 vs. 1532, p = 0.001) and a lower LVEF (41% vs. 44%, p = 0.041). Intra-coronary stents were used in 80% of the pts. The frequency of distal embolization was not different between pts treated with or without stents.

Conclusions: LAD related MI, impaired myocardial blush and presence of distal embolization are independent predictors of more extensive myocardial damage; embolization is associated with a larger enzymatic infarct size and lower LVEF.

883-4 Does Optimal or Stent-Like PTCA Provide Equivalent Outcomes Compared to Primary Stenting in Acute Myocardial Infarction? Early and Late Results From the CADILLAC Trial

Background: Rates of TVR are increased in pts with diabetes mellitus (DM) following PCI. Rate of subacute thrombosis was 1.8% vs. 0.9% (p=0.10) among pts randomized to primary PCI with abciximab vs. PCI with abciximab, stent alone, or stent with abcix. Optimal PCI was defined as QCA diameter stenosis<30% w/out significant dissection in patients who did not receive Abcx.

Methods: In the CADILLAC trial, 2,082 pts of any age with AMI <12 hours in duration underwent PCI. All pts were randomized to primary PCI, PCI + Abcx, or PCI with stent. Abcx was administered to 5% of pts undergoing stenting in the trial. We sought to verify this relationship in a large study of pts undergoing PCI for AMI.

Results: Among pts with DM, PCI + Abcx vs. primary PCI, PCI with stent, or PCI with stent + Abcx. DM was present in 346 pts (16.6%). Compared to PCI + Abcx vs. primary PCI, PCI with stent, or PCI with stent + Abcx. DM was present in 346 pts (16.6%). Compared to pts randomized to PCI + Abcx, pts randomized to PCI + Abcx had higher rates of TVR (12.0% vs. 9.2%, p=0.10). Pooling all diabetic pts assigned to PCI + Abcx vs. PCI, the 6 month rate of subacute thrombosis was 1.8% vs. 0.9% (p=0.10), and ischemic TVR occurred in 10.1% vs. 12.1% (p=0.58), 6 month TVR rates in DM stratified by the randomization arms appear in the table. Furthermore, the 6 month rate of ischemic TVR in stented diabetics was similar to that in non diabetics (7.2% vs. 5.9%, p=0.1). The 6 month rate of TVR and MACE was significantly lower in pts achieving optimal PTCA. Thus, in AMI, primary stenting provides better long-term outcomes than optimal PCI in diabetes independent of Abcx use.

Conclusions: Whereas Abcx may reduce the rate of subacute thrombosis in diabetic pts undergoing primary PCI in AMI, Abcx had no significant effect on clinical restenosis or any TVR. In contrast, a strategy of routine stent implantation significantly reduced TVR rates in DM independent of Abcx use.

Optimal PCI w/out Abcx Opt PCI w/ Abcx
All Optimal PCI All Stent
N 239 279 509 510 1014
Death 4.2% 2.6% 3.3% 4.3% 0.02
Reinfarction 0.6% 2.2% 1.6% 2.0 0.04
Ischemic TVR 13.4% 19.3% 16.5% 7.9%<p<0.001
MACE 17.2% 21.9% 19.7% 13.6%

883-5 The Salutary Effect of Prior Beta Blocker Therapy on Clinical Outcomes Following Primary Angioplasty for Acute Myocardial Infarction: A Pooled Analysis From the Primary Angioplasty in Myocardial Infarction (PAMI-1), PAMI-2, and Stent-PAMI Trials

Background: Beta-blockers (BB) have anti-ischemic, anti-arrhythmic, and anti-thrombotic properties. We hypothesized that pre-treatment with BB would have a beneficial effect on clinical outcomes in patients undergoing primary angioplasty for acute myocardial infarction.

Methods: We pooled clinical, angiographic, and outcomes data for 2637 patients enrolled in the Primary Angioplasty in Myocardial Infarction (PAMI-1), PAMI-2, and Stent-PAMI trials. We classified patients into BB group (n=1523) if they received BB before undergoing percutaneous coronary intervention (PCI), or No-BB group (n=1014) if not.

Results: BB patients were younger, had higher systolic blood pressure and heart rate, and were more likely to have Killip Class I at admission than no-BB patients. Furthermore, they had lower ejection fraction, higher door-to-balloon time, and were more likely to have the left anterior descending artery as the infarct-related artery. Although BB patients had a lower probability of death during hospitalization (1.8% vs. 3.7%, p<0.0005) and the composite end-point (5.3% vs. 7.6%, p=0.023) during hospitalization at 1-year, the incidence of death remained lower in BB patients (4.8% vs. 6.7%, p=0.042). After adjustment for baseline clinical and angiographic differences, BB patients had a lower probability of death during hospitalization (OR=0.81, 95% CI=0.60-0.90, p=0.004). The similarity in Incidence of Death<3 0.057 (p=0.0005) and the composite end-point (5.3% vs. 7.5% p=0.023) during hospitalization.

Conclusion: Pre-treatment with BB has an independent salutary effect on short-term and intermediate-term clinical outcomes in patients undergoing primary angioplasty for acute myocardial infarction.