Particular Benefit of Platelet GP IIb/IIIa Blockade and Full Heparin in Patients With Peripheral Vascular Disease Undergoing PTCA

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Atherosclerotic vascular disease may clinically manifest as coronary, cerebrovascular, or peripheral disease, but all forms appear to benefit from antithrombotic therapy. We hypothesized that pts with peripheral vascular disease (PVD) who were undergoing coronary angioplasty as part of the EPILOG trial would have a greater treatment effect from abciximab (c7E3) than those w/o PVD. Pts w/ PVD (n = 365) were older, heavier, more often female, with hypertension, diabetes, and prior PTCA. Among PVD pts, those randomized to c7E3 + standard dose heparin (n = 106) had a lower event rate when compared to placebo + heparin (19.9% vs 30.6%, p = 0.05) than c7E3 + low dose heparin (29.6%, p = 0.66). In non-PVD pts (n = 244), the combined endpoint of death, MI, revascularization at 6 months was 27% vs 25% in placebo + heparin. There was no increase in major bleeding or stroke in PVD pts.

We conclude that the presence of PVD appears to be a marker of improved benefit from c7E3 + standard dose heparin treatment during coronary intervention.

Balloon Angioplasty Versus Debulking for Treatment of Diffuse In-stent Restenosis


Background: Balloon angioplasty (BA) for diffuse in-stent restenosis (ISR) has high rates of target vessel revascularization (TVR) possibly related to residual plaque burden. By reducing this plaque burden, debulking might improve clinical outcomes.

Methods: We compared BA alone (n = 30) or debulking by rotational in = 26 or directional (n = 4) atherectomy - BA in 60 consecutive patients undergoing treatment of diffuse in-stent restenosis.

Results: Baseline characteristics were similar by quantitative coronary angiography. Procedural success was 100%, with no complications and no increase in non-Q wave MI, dissection, or "no-reflow" in the debulking group. Debubling + BA resulted in significantly lower post-procedure residual stenoses and improved flow rates. Six month follow-up was completed and showed a strong trend towards less TVR with debulking.

Conclusion: Independent predictors of repeat TVR were a smaller final minimum lumen diameter (p = 0.007) and longer lesion length (p = 0.006).

Mechanisms and Results of Additional Stent Implantation to Treat Focal In-stent Restenosis


Focal restenosis within Palmaz-Schatz stents is usually treated with repeat PTCA: using intravascular ultrasound (IVUS), the increase in lumen area has been shown to be a combination of tissue expansion and additional stent expansion with significant residual neointimal tissue. In an attempt to further reduce the need for subsequent target lesion revascularization, 56 focal restenotic stented lesions (21 vein graft, 35 native vessel) in 51 pts were treated with additional Plamaz-Schatz stent implantation. Patterns of focal in-stent restenosis were identified angiographically, and confirmed w/ IVUS at one of the margins. 19 at the central articulation and 10 within the body. Angiographic lesion length measured 6.9:1.8 mm. IVUS measurements of stent lumen, and minimal hyperplasia (MH) areas pre- and post additional stent implantation were used to assess mechanisms of lumen enlargement.

The Impact of ReoPro or Lower Speeds on Platelet Aggregation During Rotational Atherectomy

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Rotational atherectomy is associated with an increased incidence of slow flow and creatine kinase elevation which is reduced by ReoPro, implicating platelet activation as a potential mechanism. This study tests the effects of lower speed or ReoPro on platelet aggregation using an in vitro model. A 1.5 mm Rotator® was rotated in 25 mm inner diameter silicone tubing. Hemagglutinated human blood was pumped through the tubing at 10 c/min and subjected to ablation speeds of 180,000 rpm, 140,000 rpm and 0 (control). ReoPro (500 U/mL) was mixed with blood for 5 min. and the test at 180,000 rpm was repeated. The blood was collected and analyzed immediately for the quantity and size of platelet aggregates using an optical