

Percutaneous Coronary Interventions in Bypass Grafts in Northern New England 1996-1999: The Stent and GP IIb/IIIa Era

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Background: The diffuse and progressive atheroma that form in bypass grafts has made percutaneous coronary interventions (PCI) in these vessels problematic. It is unclear whether the use of stents and GP IIb/IIIa inhibitors is associated with improved in-hospital outcomes for such procedures.

Methods: From 1996-1999 data were collected on 24,635 consecutive patients undergoing a PCI in northern New England, 1,617 (6.6%) of whom had an intervention in a graft. In-hospital outcomes were collected. Multivariate logistic regression was used to adjust for differences in casemix.

Results: Stents were used in 75.0% of graft cases and GP IIa/IIIb inhibitors in 26.5%. Over this period in-hospital mortality for graft PCI patients decreased (2.3% to 0.7%, p=0.057). Stent use was associated with a significant reduction in the need for CABG (OR 0.09, 95%CI 0.03, 0.35), a reduction of borderline significance for death (OR 0.41, 95%CI 0.16, 1.06) but an increase in the risk of MI (OR 1.5, 95%CI 0.77, 2.29). GP IIb/IIIa use was associated with no difference in CABG or mortality rates but a significantly higher risk of MI (OR 3.57, 95%CI 2.12, 6.00).

| Graft PCI 1996-1999 in Northern New England (n=1,617) | | | | |
|---|-------|-----|-------------|-----|
| | Stent | | GP IIb/IIIa | |
| | + | - | + | - |
| MI (%) | 4.5 | 2.5 | 9.0 | 2.4 |
| CABG (%) | 0.3 | 2.5 | 0.7 | 0.8 |
| Death (%) | 1.2 | 2.8 | 1.9 | 0.9 |

Conclusion: Graft PCI patients selected for stent placement in Northern New England have lower rates of death and CABG than non-stented patients. GP IIb/IIIa inhibitors are used frequently in this patient population and with no apparent short-term benefit.