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**ABSTRACT:** Coronary thrombosis is the major cause of ischemic complications during percutaneous coronary interventions (PCI). The glycoprotein (GP) IIb/IIIa receptor plays a critical role in the process of platelet thrombus formation since it serves as the final common pathway for platelet aggregation. Presently, there are three commercially available intravenous GPIIb/IIIa inhibitors that block fibrinogen binding to its receptor. These agents significantly reduce the incidence of death and nonfatal myocardial infarction at 30 days in patients undergoing percutaneous coronary revascularization. In addition, the early benefits appear to be sustained at 6 months to 1 year. Increasing evidence shows that the predominant mechanism of benefit is due to a reduction in embolization to the microcirculation that occurs during PCI. While data regarding the comparative efficacy and cost-effectiveness of these agents are scarce, the magnitude of benefit appears to be greatest for abciximab. Furthermore, a mortality benefit has been demonstrated only for abciximab. Although high risk patients reap the greatest benefit from the use of these agents, it is clear that even patients who are classified as low-to-moderate risk still derive substantial benefit from their use. Finally, evidence indicates that the majority of patients with acute coronary syndromes without ST segment elevation who are scheduled to undergo PCI should be pretreated with a GPIIb/IIIa receptor antagonist.

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