This is an update of a Cochrane review to assemble all the available data to evaluate the efficacy and safety of glycoprotein IIb–IIIa inhibitors in people with ischemic stroke, within 6 hours from symptoms onset.1

Glycoprotein IIb–IIIa inhibitors are potent, fast, and selective antiplatelet agents that block the final common pathway to platelet aggregation by preventing the binding of fibrinogen molecules that form bridges between adjacent platelets.

Methods
We searched the Cochrane Stroke Group trials register (last searched June 10, 2013), MEDLINE (1966 to June 2013), EMBASE (1980 to June 2013), the Cochrane Central Register of Controlled Trials (CENTRAL; The Cochrane Library, Issue 5, 2013), and major ongoing clinical trials registers (June 2013). We also searched reference lists and contacted trial authors and pharmaceutical companies.

Results
We included 4 randomized controlled trials involving 1365 participants. Three randomized controlled trials compared the intravenous glycoprotein IIb–IIIa inhibitor abciximab with intravenous placebo (1215 participants), and 1 randomized controlled trial compared the intravenous glycoprotein IIb–IIIa inhibitor tirofiban with intravenous aspirin (150 participants). Treatment with either of these glycoprotein IIb–IIIa inhibitors did not significantly reduce long-term death or dependency (Figure 1). Abciximab was associated with a significant increase in symptomatic intracranial hemorrhage (Figure 2A), whereas the only small randomized controlled trial comparing tirofiban with aspirin showed no increased risk of bleeding complications with tirofiban (Figure 2B).

Conclusions
Glycoprotein IIb–IIIa inhibitors are associated with a significant risk of intracranial hemorrhage with no evidence of any reduction in death or disability in survivors. The conclusion is driven by trials of abciximab, which contributed 89% of the total number of study participants considered.

Disclosures
None.
Figure 1. Meta-analysis of trials comparing abciximab (treatment) vs placebo (control; A) and tirofiban (treatment) vs aspirin (control; B) on death or dependency at end of follow-up. AbESTT indicates Abciximab in Emergent Stroke Treatment Trial; CI, confidence interval; M-H, Mantel-Haenszel; and SETIS, Study of Efficacy of Tirofiban in Acute Ischaemic Stroke.

Figure 2. Meta-analysis of trials comparing abciximab (treatment) vs placebo (control; A) and tirofiban (treatment) vs aspirin (control; B) on symptomatic intracranial hemorrhage. AbESTT indicates Abciximab in Emergent Stroke Treatment Trial; CI, confidence interval; M-H, Mantel-Haenszel; and SETIS, Study of Efficacy of Tirofiban in Acute Ischaemic Stroke.
Glycoprotein IIIb–IIIa Inhibitors for Acute Ischemic Stroke
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