



Aim

This systematic review focuses on the use of glycoprotein IIb/IIIa antagonists (GPAs) in three indications: as part of medical management of non-ST-elevation acute coronary syndrome (ACS) in conjunction with aspirin and heparin; as an adjunct to percutaneous coronary intervention (PCI) in various groups of patients; and as a supplement to thrombolytic therapy in patients with acute myocardial infarction (AMI).

Conclusions and results

- 1. The effectiveness of GPAs as adjuncts to PCI is further confirmed by additional large studies showing similar effect sizes and bleeding rates.
- 2. There is no evidence for the clinical superiority of tirofiban or eptifibatide over abciximab; however, drug costs of the newer agents are slightly lower.
- 3. Evidence that GPAs are effective in non-ST-elevation ACS when PCI is not undertaken is weakened by the GUSTO IV-ACS study. A meta-analysis of individual patient data from all major trials including GUSTO IV-ACS showed a small overall effect in such patients.
- 4. Based on current evidence, it may be considered that the extra benefits of GPAs adjunctive to thrombolysis in AMI are not justified by the risks of extra bleeding.

Most trials were conducted in the USA. Extrapolation of results from trials to routine practice creates some uncertainty since these trials were conducted outside the UK, eg, early invasive strategies are less common in the UK than elsewhere. The effectiveness of GPAs may be related to the frequency of PCI, as shown by the results from an international trial (PURSUIT) and by the results from GUSTO IV-ACS. Also, the mean age of the trial subjects (59-67 years) is lower than that generally seen in clinical practice.

Recommendations

See conclusions and results.

Methods

The search strategy, trial validity assessment, and data abstraction and analysis were generally unchanged from previous reviews. Papers reporting results in high-risk subgroups were considered together with equivalent results from the main reports.

Further research/reviews required

- 1. Potential benefits of GPAs in non-ST-elevation ACS, in particular in subgroups such as women and those not scheduled for PCI.
- 2. Potential benefits of GPAs in similar troponin-negative patient subgroups.
- 3. The benefits of GPAs as an adjunct to PCI in urgent and elective patients already receiving clopidogrel or starting clopidogrel at the time of randomization, and the optimal timing in conjunction with urgent PCI.
- 4. The cost effectiveness of GPAs used with thrombolytics in selected patients with AMI, preferably in a revised formulation that reduces unwanted bleeding.