NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE

Multiple Technology Appraisal

Prasugrel with percutaneous coronary intervention for treating acute coronary syndrome (review of TA182)

Draft scope

Remit/appraisal objective

To appraise the clinical and cost effectiveness of prasugrel in combination with aspirin within its licensed indication for the treatment of acute coronary artery syndromes (review of TA182).

Background

Acute coronary syndrome (ACS) refers to a group of symptoms associated with acute myocardial ischaemia. It encompasses a spectrum of disorders or syndromes including acute myocardial infarction (MI) and unstable angina pectoris. ACS is usually the result of an acute or sub-acute primary reduction of myocardial oxygen supply provoked by disruption of an atherosclerotic plaque (build-up of material within heart vessel) associated with inflammation, thrombosis, vasoconstriction and microembolisation. ACS becomes more prevalent with increasing age and incidence is higher in men than women. In England, there were approximately 40,000 hospital admissions for unstable angina in 2009/10 and 58,247 hospital admissions for actual or suspected myocardial infarction in 2011/12.

The presence of ST-segment-elevation myocardial infarction (STEMI) on an electrocardiogram usually indicates total occlusion of the affected artery, resulting in necrosis of the tissue supplied by that artery (acute MI). This condition is treated immediately with reperfusion therapy (thrombolysis or percutaneous coronary intervention [PCI]). ACS without STEMI is classified as either unstable angina (UA) or non-ST-segment-elevation myocardial infarction (NSTEMI). NSTEMI differs from unstable angina primarily in the severity of myocardial ischaemia. In NSTEMI, the ischaemia is severe enough to result in the release of biochemical markers of myocardial injury into the blood. Immediate treatment for these conditions aims to prevent progression to total occlusion of the artery and, for people at high risk of MI, may include coronary revascularisation, either by means of PCI or coronary artery bypass graft.

Long term management of ACS includes the use of aspirin and a thienopyridine (clopidogrel, prasugrel or ticagrelor). NICE has produced clinical guidelines on secondary prevention in primary and secondary care for patients following an MI (NICE clinical guideline 48) and the early management of unstable angina and non-ST-segment-elevation myocardial infarction (NICE clinical guideline 94). According to these guidelines, it is recommended that clopidogrel in combination with low-dose aspirin should be

continued for 12 months after the most recent acute episode of NSTEMI. Thereafter, standard care, including treatment with low-dose aspirin alone, is recommended.

Since the publication of NICE clinical guideline 48, NICE has recommended prasugrel in combination with aspirin as an option for preventing atherothrombotic events in people with acute coronary syndromes having PCI, only when: immediate primary PCI for STEMI is necessary, stent thrombosis has occurred during clopidogrel treatment or the patient has diabetes mellitus (NICE technology appraisal guidance 182). NICE also recommends ticagrelor in combination with low-dose aspirin for up to 12 months as an option for people with STEMI who are to be treated with PCI, NSTEMI or unstable angina (NICE technology appraisal guidance 236).

The technology

Prasugrel (Efient, Lilly UK) is an oral inhibitor of platelet activation and aggregation through the irreversible binding of its active metabolite to the P2Y12 class of adenosine diphosphate receptors on platelets.

In February 2009, the European Medicines Agency granted a marketing authorisation for prasugrel when co-administered with aspirin for the prevention of atherothrombotic events in patients with acute coronary syndrome undergoing primary or delayed percutaneous coronary intervention.

Intervention(s)	Prasugrel in combination with aspirin
Population(s)	Patients with acute coronary syndrome undergoing primary or delayed percutaneous coronary intervention
Comparators	• clopidogrel in combination with low-dose aspirin • ticagrelor in combination with low-dose aspirin
Outcomes	The outcome measures to be considered include: • non-fatal and fatal cardiovascular events • mortality (from any cause) • atherothrombotic events • incidence of revascularisation procedures • adverse effects of treatment (including bleeding events) • health-related quality of life.
Economic analysis	The reference case stipulates that the cost effectiveness of treatments should be expressed in terms of

	incremental cost per quality-adjusted life year. The reference case stipulates that the time horizon for estimating clinical and cost effectiveness should be sufficiently long to reflect any differences in costs or outcomes between the technologies being compared. Costs will be considered from an NHS and Personal Social Services perspective.
Other considerations	If the evidence allows the following subgroups will be considered: people with unstable angina, non-ST-segment-elevation myocardial infarction and ST-segment-elevation myocardial infarction; people with diabetes mellitus. Guidance will only be issued in accordance with the marketing authorisation.
Related NICE recommendations	Related Technology Appraisals: Technology Appraisal No. 182, October 2009, 'Prasugrel for the treatment of acute coronary syndromes with percutaneous coronary intervention'. Technology Appraisal No. 230, July 2011, 'Bivalirudin for the treatment of ST-segment elevation myocardial infarction (STEMI)'. Review proposal date July 2014. Technology Appraisal No. 236, 'Ticagrelor for the treatment of acute coronary syndromes (ACS)'. Review proposal date March 2013. Related Guidelines: Clinical Guideline No. 48, May 2007, 'Secondary prevention in primary and secondary care for patients following a myocardial infarction'. Under review. Clinical Guideline No. 94, March 2010, 'Unstable angina and NSTEMI: the early management of unstable angina and non-ST-segment-elevation myocardial infarction'. Review proposal date March 2013.

Questions for consultation

Have the most appropriate comparators for prasugrel for the treatment of ACS with PCI been included in the scope? Are the comparators listed routinely used in clinical practice?

Are the subgroups suggested in 'other considerations appropriate? Are there any other subgroups of people in whom the technology is expected to be

more clinically effective and cost effective or other groups that should be examined separately?

NICE is committed to promoting equality of opportunity, eliminating unlawful discrimination and fostering good relations between people with particular protected characteristics and others. Please let us know if you think that the remit and scope may need changing in order to meet these aims. In particular, please tell us if the remit and scope:

- could exclude from full consideration any people protected by the equality legislation who fall within the patient population for which prasugrel is licensed;

- could lead to recommendations that have a different impact on people protected by the equality legislation than on the wider population, e.g. by making it more difficult in practice for a specific group to access the technology;

- could have any adverse impact on people with a particular disability or disabilities.

Please tell us what evidence should be obtained to enable the Committee to identify and consider such impacts.

Do you consider the technology to be innovative in its potential to make a significant and substantial impact on health-related benefits and how it might improve the way that current need is met (is this a 'step-change' in the management of the condition)?

Do you consider that the use of the technology can result in any potential significant and substantial health-related benefits that are unlikely to be included in the QALY calculation?

Please identify the nature of the data which you understand to be available to enable the Appraisal Committee to take account of these benefits.