NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE

Health Technology Appraisal

Apixaban for the prevention of venous thromboembolism in acute medical illness

Draft scope (Pre-referral)

Draft remit/appraisal objective

To appraise the clinical and cost effectiveness of apixaban, within its licensed indication, for the prevention of venous thromboembolism in acute medical illness.

Background

Venous thromboembolism (VTE) is a term used to describe deep vein thrombosis and pulmonary embolism. DVT is the formation of a thrombus in a deep vein, usually of the lower limbs. Distal DVTs are those in deep veins of the calf, and are the most common type of DVT. Proximal DVTs are those that extend to the popliteal, superficial femoral, common femoral, or iliac veins. With DVT, dislodged thrombi may travel to the lungs and this is called pulmonary embolism (PE). Massive PE can cause sudden death and those who survive a PE often require intensive care and recovery can take several weeks or months.

There are numerous risk factors for VTE, which include cancer, major surgery, increasing age, obesity and inherited or acquired clotting tendency. In addition, VTE can occur during acute medical illness, which may include myocardial infarction, stroke, spinal cord injury and severe infection or exacerbation of chronic obstructive pulmonary disease. VTE has an annual incidence of approximately 1 in 2,000 in the general population in the UK; however this varies substantially with age. The incidence of PE and DVT in patients with acute medical illness in the absence of preventative treatment is about 1% and 13%, respectively. The risk of developing VTE depends on the condition for which the person is admitted and any other predisposing factors.

In clinical practice, pharmacological prevention is given to people with acute medical conditions who are at risk of developing VTE. This is usually given until the perceived risk is reduced to the extent that preventative treatment is not required. Treatments currently used in acute medical conditions include unfractionated heparin, low molecular weight heparin and fondaparinix.

The technology

Apixaban (BMS-562247, Bristol Myers Squibb and Pfizer) is a direct oral factor Xa inhibitor which prevents the formation of thrombin and fibrin; the key components in blood clot formation.

Apixaban does not have a UK marketing authorisation for the prevention of VTE events in acute medical illness. It is being studied in a clinical trial compared with enoxaparin for the prevention of VTE or PE in patients hospitalised for acute medical illness including people with congestive heart failure or acute respiratory failure, infection (without septic shock), acute rheumatic disorder and inflammatory bowel disease.

Intervention(s)	Apixaban
Population(s)	People with acute medical illness for whom anticoagulation therapy is indicated
Comparators	• unfractionated heparin • low molecular weight heparins • fondaparinux
Outcomes	The outcome measures to be considered include: • mortality • incidence of VTE • post DVT complications including thrombotic syndrome • 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	Guidance will only be issued in accordance with the marketing authorisation

Related NICE recommendations	Related Technology Appraisals: None Related Guidelines: Clinical Guideline (in progress, earliest anticipated publication date November 2009). Reducing the risk of venous thromboembolism (deep vein thrombosis and pulmonary embolism) in patients admitted to hospital.

Questions for consultation

Have the most appropriate comparators for the treatment of venous thromboembolism in people with acute medical illness been included in the scope? Are the comparators listed routinely used in clinical practice?

Are there any subgroups of patients in whom the technology is expected to be more clinically effective and cost effective or other groups that should be examined separately? Should different subgroups of people with acute medical illness be specified?

Are there any issues that require special attention in light of the duty to have due regard to the need to eliminate unlawful discrimination and promote equality?

NICE intends to appraise this technology through its Single Technology Appraisal (STA) Process. We welcome comments on the appropriateness of appraising this topic through this process. (Information on the Institute's Technology Appraisal processes is available at http://www.nice.org.uk/aboutnice/howwework/devnicetech/technologyappraisalprocessguides/technology_appraisal_process_guides.jsp)