Recommendation

Ticagrelor (Brilique®) has been approved for use as an oral antiplatelet agent for the prevention of atherothrombotic events in adult patients with Acute Coronary Syndrome (ACS). This is in line with NICE TA 236.

From 1 February 2014 the cardiologists at East Kent Hospitals Trust will be prescribing Ticagrelor for patients meeting the following criteria:

- STEMI patients undergoing PCI.
- STEMI patients being medically managed assessed as high risk.
- NSTEMI patients assessed as high risk - PCI or medical management

This document provides prescribing and monitoring information for prescribers in primary care.

Approved by: East Kent Prescribing Group *(Representing Ashford CCG, Canterbury and Coastal CCG, South Kent Coast CCG and Thanet CCG)*
Date: Aug 2013
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Ticagrelor (Brilique®) - oral antiplatelet agent for the prevention of artherothrombotic events in adult patients with Acute Coronary Syndrome (ACS)

Key Issues for Primary Care

- **New antiplatelet for ACS co-administered with aspirin. It is an alternative treatment to clopidogrel.**
- **Dose is 90mg twice daily.**
- **Ticagrelor should only be initiated under the recommendation of a cardiologist.**
- **Maximum of 12 months treatment - add end dates onto repeat template and to dose instructions.**
- **Creatinine levels may increase during treatment with ticagrelor. Renal function should be checked at baseline and after one month**.* *see below*

Ticagrelor (Brilique®) is a new oral antiplatelet agent licensed for the prevention of artherothrombotic events in adult patients with ACS (unstable angina, non ST elevation myocardial infarction NSTEMI or ST elevated myocardial infarction STEMI); including patients managed medically and those who are managed with percutaneous coronary intervention (PCI) or coronary artery by-pass grafting (CABG) when co-administered with aspirin.(1)
Results from the PLATO study have shown that ticagrelor demonstrated a reduction in MI, cardiovascular death and overall death when compared to clopidogrel and this beneficial effect was seen without a significant increase in major bleeding.(2)

The cardiologists at East Kent Hospitals Trust have agreed to use ticagrelor as an alternative to clopidogrel in the following patients:

- STEMI patients undergoing PCI.
- STEMI patients being medically managed assessed as high risk.
- NSTEMI patients assessed as high risk - PCI or medical management

Ticagrelor should be stopped 7 days before surgery.

DOSE:

- Treatment should be initiated with a single 180mg loading dose and then continued at 90mg twice daily for a maximum of 12 months.
- Patients taking ticagrelor should also take aspirin (75mg to 150mg daily) unless contraindicated.
- Ticagrelor may be taken with or without food.

CAUTION in the following patient groups:

- **Increased bleeding risk**

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- **Asthma/COPD** prolonged or worsened dyspnoea this should be investigated fully and if not tolerated,treatment with ticagrelor should be stopped and replaced with clopidogrel or prasugrel.
- **Patients at risk of bradycardia**
- **History of hyperuricaemia, gouty arthritis or uric acid nephropathy**
- *** Renal impairment** - creatinine levels may increase during treatment with ticagrelor. Renal function should be checked at baseline and after one month and thereafter according to routine medical practice, paying special attention to patients >75 years, patients with moderate/severe renal impairment and those on an ARB.

  The clinical significance of this increase in creatinine observed in the trial is unclear. If eGFR falls to an absolute value of <60 ml/min and by >30% from baseline, it is recommended to consider dose reduction or withdrawal of other drugs that may affect kidney function (ACEi/ARB, diuretics, spironolactone) and recheck eGFR after 48 to 72 hours. If no improvement in eGFR after these manoeuvres, renal and cardiologist advice should be sought. Ticagrelor may then be changed to clopidogrel which is associated with a lower incidence of renal impairment..

COMMONLY USED INTERACTING DRUGS (see BNF/ SPC for full list)

- **Clarithromycin, ketoconazole, ritonavir and atazinavir** - contraindicated.
- Ticagrelor increases plasma concentration of **simvastatin and digoxin.**
- **Dexamethasone, phenytoin, carbamazepine and phenobarbital** can reduce the efficacy of ticagrelor. Consider clopidogrel or prasugrel as an alternative.
- **Verapamil, quinidine, and ciclosporin** may increase ticagrelor exposure. Consider clopidogrel or prasugrel as an alternative.
- Possible increased risk of bleeding with **SSRIs.**
- **Grapefruit juice –** can increase ticagrelor levels in large quantities so advise to avoid.

CONTRAINDICATIONS

- Active pathological bleeding
- History of intracranial haemorrhage
- Moderate to severe hepatic impairment
- Co-administration of ticagrelor with strong CYP3A4 inhibitors (e.g., ketoconazole, clarithromycin,nefazodone, ritonavir, and atazanavir)
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1)SPC (Brilique). Available from www.medicines.org.uk (2) Wallentin L, Becker RC, Budaj A et al. Ticagrelor versus clopidogrel in patientswith acute coronary syndrome. N Engl J Med 2009; 361:

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