**Guidelines for Use of Tirofiban in NSTEMI/Unstable Angina**

**Indications:**
Consider offering tirofiban to patients who have an intermediate or higher risk of future adverse cardiovascular events (predicted 6 month mortality >3% using the Global Registry of Acute Cardiac Events [GRACE] risk calculator: GRACE ACS Risk Model).

**Additional drugs:**
Aspirin must be given before commencing tirofiban and any patients not currently being treated with fondaparinux or Clexane® should receive intravenous unfractionated heparin (5000iu bolus simultaneously with the start of tirofiban followed by intravenous infusion titrated to APPT).

**Monitoring:**
If bleeding occurs consider discontinuing tirofiban. Platelet count, haemoglobin and haematocrit should be determined before using tirofiban, within 2-6 hours of starting therapy and daily thereafter.

**Side effects:**
Bleeding (risk increases with declining renal function), nausea, fever, headache.

**Contra-indications:**
- History of stroke within 30 days or any history of haemorrhagic stroke
- Known history of intracranial disease
- Active or recent (within 30 days) clinically relevant bleeding
- Malignant hypertension
- Recent trauma or major surgical intervention (within the last 6 weeks)
- Thrombocytopenia (platelets < 100,000 per mm³)
- Clotting disturbances (PT>1.3 times normal, INR >1.5)
- Severe liver failure

Tirofiban is also not recommended in the following conditions where an increased risk of bleeding is suspected:
- Traumatic CPR, organ biopsy or lithotripsy within the last two weeks
- Severe trauma or major surgery >6 weeks but <3 months previously
- Active peptic ulcer within the last three months
- Hypertension (180/110 mmHg)
- Acute pericarditis
- Active or a known history of vasculitis
- Aortic dissection
- Haemorrhagic retinopathy
- Occult blood in stool or haematuria

Gloucestershire Cardiology Group
Approved by Drugs & Therapeutics Committee
Updated

May 2005
June 2005
November 2010
Concurrent use of drugs (e.g. warfarin, dextran) which increase bleeding risk

There is also no therapeutic experience with tirofiban in patients for whom thrombolytic therapy is indicated and thus is not recommended in these circumstances. It should be discontinued in patients requiring thrombolytic therapy.

**Use tirofiban with caution in the following conditions/ patient groups:**

- Recent clinically relevant bleeding (<1 year)
- Puncture of a non-compressible vessel within the previous 24 hours
- Severe acute or chronic heart failure
- Cardiogenic shock
- Mild to moderate liver insufficiency
- Platelets <150,000/mm$^3$
- Haemoglobin <11 g/dl or haematocrit <34%

**Additional Information:**
Half life of tirofiban is about 2 hours in patients with coronary artery disease and is increased by over 50% in patients with a creatinine clearance of <30ml/minute (see administration section below).
Administration of Tirofiban (Aggrastat® Solution for Infusion)

Presentation:
Pre-diluted (ready to use) 250ml bag containing tirofiban 50mcg per ml.

Dosage:
Intravenous infusion according to the table below.
Note: The initial 30 minute loading infusion should be followed by a reduced-rate maintenance infusion (see table) for at least 48 hours but not usually more than 108 hours (4.5 days). By this time the patient should be stable or have undergone angiography / angioplasty.

<table>
<thead>
<tr>
<th>Patient weight (kg)</th>
<th>Most patients</th>
<th>Severe kidney failure (CrCl &lt;30ml/min)</th>
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<tbody>
<tr>
<td></td>
<td>30 min loading infusion rate (ml/hr)</td>
<td>Maintenance infusion rate (ml/hr)</td>
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<td>30-37</td>
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