**Drug Therapy Protocols: Tirofiban**

<table>
<thead>
<tr>
<th><strong>Policy code</strong></th>
<th>DTP_TIR_0119</th>
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<tbody>
<tr>
<td><strong>Date</strong></td>
<td>January, 2019</td>
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<tr>
<td><strong>Purpose</strong></td>
<td>To ensure a consistent procedural approach to tirofiban administration.</td>
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<td><strong>Scope</strong></td>
<td>Applies to all Queensland Ambulance Service (QAS) clinical staff.</td>
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<td><strong>Health care setting</strong></td>
<td>Pre-hospital assessment and treatment.</td>
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<td><strong>Population</strong></td>
<td>Applies to all ages unless specifically mentioned.</td>
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<tr>
<td><strong>Source of funding</strong></td>
<td>Internal – 100%</td>
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<tr>
<td><strong>Author</strong></td>
<td>Clinical Quality &amp; Patient Safety Unit, QAS</td>
</tr>
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<td><strong>Review date</strong></td>
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Tirofiban

Drug class
Antiplatelet

Pharmacology
Tirofiban is a glycoprotein (GP) inhibitor that prevents the binding of fibrinogen, von Willebrand factor and other adhesive molecules to the platelet group IIb/IIIa receptor sites, thereby preventing platelet aggregation.\(^1\)\(^,\)\(^2\)

Metabolism
Hepatic and excreted in the urine.\(^1\)

Indications
• Reduction of *ischaemic events* associated with ACS and *prior to PCI*
• Critical care patients during interfacility transport

Contraindications
• Allergy and/or Adverse Drug Reaction
• Active bleeding or a history of bleeding diathesis within 30 days
• Concomitant use of warfarin
• Bleeding disorders
• History of intracranial haemorrhage, neoplasm, arteriovenous malformation or aneurysm
• Aortic dissection or pericarditis
• Uncontrolled hypertension (systolic BP \(\geq 180\) AND/OR diastolic BP \(\geq 110\))

Precautions
• Recent epidural procedure
• Chronic haemodialysis
• History of coagulopathy, platelet disorder or thrombocytopenia
• Reduced doses are required for patients with renal impairment

January, 2019
Tirofiban

Presentation

- Ampoule, 12.5 mg/50 mL tirofiban

Onset | Duration | Half-life
--- | --- | ---
Rapid | 4–8 hours | ≈ 2 hours

Side effects

- Haemorrhage
- Thrombocytopenia
- Nausea and/or vomiting
- Rash

Special notes

- Ambulance officers must only administer medications for the listed indications and dosing range. Any consideration for treatment outside the listed scope of practice requires mandatory approval via the QAS Clinical Consult and Advice Line.
- All tirofiban infusions are to be initiated using hospital supplies. Tirofiban will not be carried by QAS.
- Discard any unused tirofiban preparation after 24 hours.
- Tirofiban should be used concomitantly with heparin and aspirin unless either is contraindicated.
- Reduced dosage is required in patients with severe renal insufficiency (creatinine clearance < 30 mL/min). All dose adjustments must be authorised by the RSQ Clinical Coordinator.

Adult dosages

- Reduction of ischaemic events associated with ACS and prior to PCI
- Critical care patients during interfacility transport

Schedule

- S4 (Restricted drugs)

Routes of administration

- Intravenous infusion (IV INF)

Continue tirofiban infusions already commenced at hospital, using the same concentration and administration rate already established. This may involve withdrawing the patient’s previously mixed and labelled solutions from the referring hospital.
Paediatric dosages

Note: QAS officers are NOT authorised to administer tirofiban to paediatric patients.