SESLHDMG/147
Medicine Guideline for the Safe Use of

TIROFIBAN in emergency interventional neuroradiology procedures

Health
South Eastern Sydney Local Health District

Tirofiban IS A HIGH-RISK MEDICINE **USE WITH CAUTION AND ENSURE THE DIRECTIONS WITHIN THIS PROTOCOL ARE FOLLOWED CAREFULLY**	
Areas where Protocol/Guideline applicable	Interventional neuroradiology
Authorised Prescribers:	Neurointerventionist
Important Safety Considerations	All other areas
Indication for use	Emergency insertion of neuroendovascular stent
Clinical condition	Carotid artery tandem lesion, requiring endovascular clot retrieval and stent insertion. *Emergency neurointervention procedures require intravenous antiplatelet therapy.* **Not for use in planned procedures.**
Proposed Place in Therapy	First line
Adjunctive Therapy	Intravenous aspirin Oral dual antiplatelet therapy – to be commenced post-procedure
Contra-indications	• Known hypersensitivity to any component of the product • Active internal bleeding or a history of bleeding diathesis within the previous 30 days • A history of intracranial haemorrhage, intracranial neoplasm, arteriovenous malformation, or aneurysm • A history of thrombocytopenia following prior exposure to tirofiban • History of stroke within 30 days or any history of haemorrhagic stroke. Major surgical procedure (including epidural or spinal anaesthesia) or severe physical trauma within 1 month. • History, symptoms, or findings suggestive of aortic dissection. Severe uncontrolled hypertension (systolic blood pressure > 180 mmHg and/or diastolic blood pressure > 110 mmHg). • Concomitant use of another parenteral GP IIb/IIIa inhibitor. • Acute pericarditis.
Precautions	• Recent bleeding (less than one year), including a history of gastrointestinal bleeding or genitourinary bleeding of clinical significance • Known coagulopathy, platelet disorder or history of thrombocytopenia • Platelet count <150 x 10^9/L

	• History of cerebrovascular disease within one year • Haemorrhagic retinopathy • Chronic haemodialysis
Important Drug Interactions	Increased risk of bleeding with anticoagulants and antiplatelets including heparin, aspirin, and warfarin.
Dosage	Dosage range is 0.5 – 2 mg by intravenous or intra-arterial injection. Dose to be determined by neurointerventionist (dependent on patient factors, stent type and location).
Duration of therapy	Single intraoperative dose
Prescribing Instructions	Prescribing on the Anaesthetic Record.
Administration Instructions	Vial contains 12.5 mg / 50 mL tirofiban. Draw up the required dose from the vial (e.g., 4 mL for a 1 mg dose) and dilute with sodium chloride 0.9% to a final volume of 20 – 30 mL. Inject (intravenous or intra-arterial) as a slow push over 5 minutes. A syringe driver may be used for slow administration.
Monitoring requirements	• Platelet count, haemoglobin, haematocrit and signs of bleeding • Rate of state patency (effectiveness) • Rate of stent thrombosis (treatment failure)
Management of Complications	Management of acute bleeding and stent restenosis
Storage requirements	Vial: store below 25 °C. Do not freeze. Protect from light. Infusion solution: stable for 24 hours below 25 °C, or at 2 to 8 °C.
Basis of Protocol/Guideline:	1. Australian Medicines Handbook 2025 2. Australian Injectable Drugs Handbook 9th Edition 3. MIMS Online, Tirofiban. Last updated 1 March 2023 4. Kim, KS et al. (2018). Management of antiplatelet therapy in patients undergoing neuroendovascular procedures. J Neurosurg 129:890-905 5. Jang, SH et al. (2021). The Safety of Intra0arterial Tirofiban during Endovascular Therapy after Intravenous Thrombolysis. Am J Neuroradiol 42 (9):1633-1637
Groups consulted in development of this guideline	Pharmacy Department, Prince of Wales Hospital

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AUTHORISATION	
Author (Name)	Dr Andrew Cheung
Position	Neurointerventionist
Department	Neurointervention Department, Prince of Wales Hospital
Position Responsible (for ongoing maintenance of Protocol)	Head of Department, Neurointervention, Prince of Wales Hospital
GOVERNANCE	
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