University Health System

GP IIb/IIIa Inhibitor Adult Cardiology Treatment Dosing and Monitoring Guidelines

During times of eptifibatide shortage, the following guidance is available for tirofiban use[i]

	Eptifibatide (Integrilin®)	Tirofiban (Aggrastat®)
Dosing **ACS**[ii]	**Loading dose:** 180 mcg/kg IV bolus (max: 22.6 mg) **Maintenance infusion:** 2 mcg/kg/minute (max: 15 mg/hr) up to 72 hours (until discharge or CABG surgery)	**Loading dose:** 25 mcg/kg IV over 5 minutes **Maintenance infusion:** 0.15 mcg/kg/minute continued for up to 18 hours
PCI[ii]	**1st Loading dose:** 180 mcg/kg IV bolus (max: 22.6 mg) **Maintenance infusion:** 2 mcg/kg/minute (max: 7.5 mg/hr) continued for up to 18 to 24 hours **2nd loading dose:** 180 mcg/kg IV bolus (max: 22.6 mg) should be administered 10 minutes after the first bolus	**Loading dose:** 25 mcg/kg IV over 5 minutes **Maintenance infusion:** 0.15 mcg/kg/minute continued for up to 18 hours
Dose Adjustment	**For CrCl ≤ 50 mL/minute:** **1st loading dose:** 180 mcg/kg IV bolus (max: 22.6 mg) **Maintenance infusion:** 2 mcg/kg/minute (max 7.5 mg/hr) **2nd loading dose (if PCI):** 180 mcg/kg IV bolus (max: 22.6 mg) should be administered 10 minutes after the first bolus **For end-stage renal disease:** CONTRAINDICATED	**For CrCl ≤ 60 mL/minute:** **Loading dose:** 25 mcg/kg IV over 5 minutes **Maintenance infusion:** 0.075 mcg/kg/minute continued for up to 18 hours
Contraindications	– Severe hypersensitivity reaction to eptifibatide – History of bleeding diathesis or evidence of active abnormal bleeding within the previous 30 days – Major surgery within the preceding 6 weeks – Severe HTN (SBP > 200 mmHg or DBP > 110 mmHg) not adequately controlled on antihypertensive therapy – History of stroke within 30 days or any history of hemorrhagic stroke – Dependency on renal dialysis	– Severe hypersensitivity reaction to tirofiban – A history of thrombocytopenia following prior exposure to tirofiban – Active internal bleeding – History of bleeding diathesis – Major surgical procedure or severe physical trauma within previous month
Mechanism of Action	Reversible fibrinogen antagonist binding to GP IIb/IIIa receptor	Reversible fibrinogen antagonist binding to GP IIb/IIIa receptor
Onset of Action	> 80% inhibition of platelet aggregation within 5 minutes; maximal effect achieved within 1 hour (at the doses listed above)	> 90% inhibition of platelet aggregation within 10 minutes (at the doses listed above)
Duration of Action (normalization of platelet function near baseline)	4 to 8 hours following discontinuation	4 to 8 hours following discontinuation
Elimination ($t_{½}$; route)	2.5 hours; 50% renal	2 hours; 65% renal and 25% fecal
Monitoring	**Baseline:** platelet counts, hemoglobin, hematocrit **Within 6 hours of loading:** platelet counts, hemoglobin, hematocrit, bleeding **Daily:** platelet counts, hemoglobin, hematocrit, bleeding	**Baseline:** platelet counts, hemoglobin, hematocrit **Within 6 hours of loading:** platelet counts, hemoglobin, hematocrit, bleeding **Daily:** platelet counts, hemoglobin, hematocrit, bleeding
Compatibility	Do not administer through the same IV line as furosemide	Do not administer through the same IV line as diazepam
Notes:	Discontinue at least 2-4 hours prior to surgery	Discontinue 3-6 hours prior to surgery Post-intervention: continue up to 18 hours, or until P2Y12 agent has clinical effect. Tirofiban may be discontinued: – 2 to 4 hours after prasugrel or ticagrelor load is given – 4 to 6 hours after clopidogrel load is given

[i] These guidelines apply to common clinical circumstances and may not be appropriate for certain patients and situations. The treating clinician must use judgement in applying guidelines to the care of individual patients

[ii] ACS= acute coronary syndrome (UA/NSTEMI/STEMI); PCI= percutaneous coronary intervention

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