abxiximab (ab-siks-im-ab)

Therapeutic: antiplatelet agents
Pharmacologic: glycoprotein IIb/IIIa inhibitors

Indications
Used with heparin and aspirin to decrease cardiac ischemic complications before or after percutaneous coronary intervention (PCI), including percutaneous transluminal coronary angioplasty (PTCA). Unlabeled Use: In combination with heparin and a low-dose alteplase or reteplase to enhance coronary perfusion in patients with acute coronary syndromes (ACS).

Action
Binds to glycoprotein (GP) receptors on platelet surfaces (GP IIb/IIIa), resulting in decreased platelet aggregation.

Therapeutic Effects:
Decreased incidence of restenosis of coronary arteries and improved myocardial perfusion.

Pharmacokinetics
Absorption: IV administration results in complete bioavailability.
Distribution: Unknown.
Metabolism and Excretion: Remains bound to platelet receptor sites for up to 10 days.
Half-life: 30 min.

TIME/ACTION PROFILE (effect on platelet function)
ROUTE ONSET PEAK DURATION
IV within min 2 hr 24–48 hr

Contraindications/Precautions
Contraindicated in: Hypersensitivity to abxiximab or murine (mouse) protein; Active internal bleeding; Recent significant GI or GU bleeding (within 6 wk); History of CVA (within 2 yr) or CVA with neurologic sequelae; History of bleeding disorder; Recent (within 7 days) oral anticoagulant therapy (PT >1.2 times control); Platelet count < 100,000 cells/mm³; Recent trauma or major surgery (within 6 wk); Intercranial neoplasm, hematoma or 60 ml hemorrhage; Severe uncontrolled hypertension; History of vasculitis; Concurrent use of another parenteral GP IIb/IIIa inhibitor; Recent concurrent antiplatelet therapy.

Use Cautiously in: Patients weighing <75 kg or >65 yr (increased risk of bleeding); History of previous GI pathology; Concurrent thrombolytic or heparin therapy; PCI within 12 hr of onset of MI symptoms or PCI procedure lasting >70 min; OB, Lactation, Pedi: Safety not established.

Adverse Reactions/Side Effects
CNS: abnormal thinking, dizziness, headache.
CV: hypotension, atrial fibrillation/flutter, bradycardia, complete AV block, supraventricular tachycardia, chest pain, peripheral edema.
Hemat: BLEEDING, thrombocytopenia.
Misc: allergic reactions including ANAPHYLAXIS.

Interactions
Drug-Drug: Risk of bleeding may be increased by concurrent thrombolytics, warfarin, NSAIDs, cefoperazone, cefotetan, dipyridamole, dextran, clopidogrel, heparin, heparin-like drugs, valproates, or ticlopidine, although concurrent use with heparin and aspirin is recommended.

Drug-Natural Products: Increased bleeding risk with anise, arnica, chamomile, cherries, feverfew, garlic, ginger, ginkgo, Panax ginseng, and others.

Route/Dosage
IV (Adults): 250 mcg (0.25 mg)/kg bolus 10–60 min prior to PCI, followed by 0.125 mcg/kg/min (up to 10 mcg/min) continuous infusion for 12 hr; patients with unstable angina not responding to conventional therapy and who are planned to undergo PCI within 24 hours—250 mcg (0.25 mg)/kg bolus followed by 10 mcg/min continuous infusion for 18–24 hr, ending 1 hr after PCI.

NURSING IMPLICATIONS
Assessment
Monitor ECG and vital signs closely throughout therapy.

Situations: Patient bleeding at all potential bleeding sites (catheter insertion; arterial and venous puncture; cardiod, needle puncture; GI, GU, and retroperitoneal sites) frequently throughout therapy. If serious uncontrollable bleeding occurs, stop abciximab and continue heparin therapy.

Recent (within 7 days) oral anticoagulant therapy (PT >1.2 times control); Platelet count < 100,000 cells/mm³; Recent trauma or major surgery (within 6 wk); Intercranial neoplasm, hematoma or 60 ml hemorrhage; Severe uncontrolled hypertension; History of vasculitis; Concurrent use of another parenteral GP IIb/IIIa inhibitor; Recent concurrent antiplatelet therapy.

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Check the sheath insertion site and distal pulses of affected leg(s) frequently while femoral artery sheath is in place and for 6 hr after femoral artery sheath is removed. Measure any hematoma and monitor for signs of enlargement.

Monitor for signs of hypersensitivity reaction or anaphylaxis (rash, pruritus, laryngeal edema, wheezing) throughout therapy. If reactions occur, stop abciximab immediately and initiate treatment of anaphylaxis. Epinephrine, dopamine, theophylline, antihistamines, and corticosteroids should be readily available.

Observe patient for mental status changes, assess nose and mouth mucous membranes, and examine sputum, stool, and emesis for presence of blood. Use care when removing dressings.

Check platelet count, PT, and aPTT before infusion of abciximab to identify pre-existing hemostatic abnormalities.

Monitor platelet count prior to therapy, 2–4 hr following bolus administration, and at 24 hr or before discharge, whichever is first. If platelet count decreases to <100,000/mm³ or 25% of pretreatment levels, verify true thrombocytopenia by additional platelet counts drawn in separate tubes containing EDTA, citrate, or heparin. If thrombocytopenia is verified, immediately discontinue abciximab. If severe uncontrolled bleeding occurs or surgery is required (especially major procedures) within 48–72 hr of abciximab therapy, determine bleeding time. Platelet transfusions may partially restore platelet function.

Ineffective tissue perfusion (Indications)
Risk for injury (Side Effects)

High Alert: Accidental overdosage of antiplatelet medications has resulted in patient harm and/or death from internal hemorrhage or intracranial bleeding. Have second practitioner independently check original order, dosage calculations, and infusion pump settings.

Direct IV:
Withdraw the amount of abciximab needed for bolus through a sterile, nonpyrogenic, low-protein-binding 0.2- or 0.22-micron filter into a syringe. Administer as a bolus injection 10–60 min before the start of PCI or in patients for which PCI is planned within the next 24 hr.

Continuous Infusion: Withdraw 4.5 mL of abciximab through a sterile, nonpyrogenic, low-protein-binding 0.2- or 0.22-micron filter into a syringe. Inject into 250 mL of 0.9% NaCl or D5W to make a solution with a final concentration of 35 mcg/mL. Do not shake. Discard the unused portion in the vial and any of the solution unused at the end of the 12-hr infusion. Store in the refrigerator; do not freeze.

Infuse at a rate of 17 mL/hr (10 mcg/min) for 12 hr following PCI, or in patients for which PCI is planned within 24 hr, for 18–24 hr, concluding 1 hr after PCI. Administer via infusion pump through an in-line sterile, nonpyrogenic, low-protein-binding 0.2- or 0.22-micron filter.

Additive Incompatibility: Administer in a separate IV line; do not add other medications to infusion solution.

Explains the purpose of the medication to patient and family. Instruct patients to report hypersensitivity reactions (rash, dyspnea), bleeding, or bruising.

Relax need for bedrest, leg immobilization, and minimal handling during therapy to avoid injury.

Prevention of acute cardiac ischemic complications following PCI.
Enhanced coronary perfusion in patients with acute coronary syndromes.

Why was this drug prescribed for your patient?