Heparin Induced Thrombocytopenia Protocol

Receiving or has received heparin within 100 days

Unexplained Plt fall (>50%) usually < 1 day if heparin exposure < 100 days, or typically occurs 5-14 days after heparin

Very likely not HIT
- No lab testing
- Continue heparin if necessary

New Thrombosis
- Acute reaction after bolus heparin
- Skin lesion at subcutaneous injection site

DC Heparin or LMWH (incl. flushes and coated lines)
- Order IgG ELISA
- Start DTI argatroban or lepirudin
- Avoid prophylactic Plt transfusion

Thrombosis or other sequelae
- New thrombosis; skin necrosis; acute systemic reaction after heparin bolus
- Progressive or recurrent thrombosis; Non-necrotizing skin lesions; Suspected thrombosis

Other causes
- None apparent
- Possible
- Definite

Adapted Smythe et al Am J Health-Syst Pharm 2012; 69: 241

Adapted Lo et al J Thromb Haemost 2006; 4: 759–65
**Bivalirudin (Angiomax®)**
Analog of recombinant hirudin (avoid use in patients allergic to lepirudin)
MOA: Directly inhibits all actions of thrombin
Duration: $t_{1/2} = 25$ minutes
aPTT values return to baseline in 2-6 hours after discontinuation (significantly prolonged with renal insufficiency)
Elimination: 80% is proteolytically cleaved by thrombin with the remaining 20% eliminated by renal mechanisms
Extracorporeal elimination: Dialysis-Yes, Hemofiltration-Limited, Plasmapheresis-Yes
Precautions: bleeding, antibody formation, allergic reactions, renal dysfunction
****Bivalirudin is the preferred agent for patients with hepatic dysfunction or combined hepatic and renal dysfunction****

**Argatroban**
Selective thrombin inhibitor
MOA: Binds to thrombin active site inhibiting all actions of thrombin
Duration: $t_{1/2} = 30-60$ minutes.
aPTT values return to baseline in 2-6 hours after discontinuation (significantly prolonged with hepatic insufficiency)
Elimination: Liver and primarily excreted via biliary tract
Extracorporeal elimination: Dialysis-Minimal, Hemofiltration-No, Plasmapheresis-Yes
Precautions: bleeding, liver dysfunction
****Argatroban is the preferred agent for patients with renal dysfunction and normal hepatic dysfunction****

**Conversion to Warfarin**
Coadministration of direct thrombin inhibitors (especially argatroban) and warfarin produce synergistic effects on INR
Start warfarin therapy when platelets greater than 80,000 or after two consecutive increases in platelet count
To determine if patient is therapeutic on warfarin, discontinue direct thrombin inhibitor for 2-4 hours and check INR
INR may need to be greater than or equal to 4 on combination therapy to result in therapeutic INR on warfarin alone