

Intravenous Argatroban Therapy Protocol- An IV Direct thrombin Inhibitor for Systemic Anticoagulation with Heparin Induced Thrombocytopenia (HIT)

1. Discontinue all sources of heparin (IV, sc, heparin coated catheters & flushes) & LMWH's.
2. Can cause false elevations of INR - refer to references for transition to warfarin.
3. Adjust dose for approximate goal of INR 4-5 during the first 5 days of concomitant argatroban and warfarin therapy

<u>Initials</u>	<u>Labs and tests:</u> CBC, PT, PTT Electrolytes, BUN/Creat PTT 4 hours after Argatroban is instituted PTT per Argatroban protocol below CBC Every other day while on Argatroban PTT daily once Argatroban dose stable and for duration of Argatroban infusion	
Patient Actual Body Weight: _____kg		
A. Bolus: No initial bolus dose required.		
Infusion: 250 mg/ 250 mls NS= 1mg/1 ml= 1000 mcg/ml		
Initial dose: 2 mcg/kg/min for HIT, titrate to maintain aPTT 1.5-3 x pt's baseline or 1.5-3 x mean of lab control range (27 sec). = Goal aPTT 40-70 secs.		
Then titrate to target PTT by nomogram below.		
NOMOGRAM FOR Argatroban DOSE ADJUSTMENT:		
Target aPTT: 40-70 secs		
<u>PTT secs</u>	<u>Rate of infusion</u>	<u>Check PTT in (hrs)</u>
<30	Increase by 1 mcg/kg/min	2 hrs
30-40	Increase by 0.5 mcg/kg/min	2 hrs
40-70 (target range)	No change = same rate	Next AM
71-90	Decrease by 0.5 mcg/kg/min	2 hrs
> 90	Decrease by 1 mcg/kg/min	2 hrs
B. Pt's with Mod. Hepatic dose or Bilirubin > 1.5, CHF, MSOF, severe anasarca:		
Reduce initial dose to, then titrate as above.		
Bolus: No initial bolus dose required.		
Infusion: 250 mg/ 250 mls NS= 1mg/1 ml= 1000 mcg/ml		
Initial dose: 0.5 mcg/kg/min for HIT, titrate to maintain aPTT 1.5-3 x pt's baseline or 1.5-3 x mean of lab control range (27 sec). = Goal aPTT 40-70 secs.		
Then titrate to target PTT by nomogram below.		
Hepatic Dosing NOMOGRAM FOR Argatroban DOSE ADJUSTMENT:		
Target aPTT: 40-70 secs		
<u>PTT secs</u>	<u>Rate of infusion</u>	<u>Check PTT in (hrs)</u>
<30	Increase by 0.2 mcg/kg/min	2 hrs
30-40	Increase by 0.1 mcg/kg/min	2 hrs
40-70 (target range)	No change = same rate	Next AM
71-90	Decrease by 0.1 mcg/kg/min	2 hrs
> 90	Decrease by 0.2 mcg/kg/min	2 hrs
RN to document rate changes on flow sheet		

Warfarin Overlap with Argatroban

Note: argatroban will significantly elevate and provide false PT/INR values. Follow warfarin dosing guideline below when determining adjustment of warfarin dosing.

1. Initiate warfarin only when the platelet count has substantially recovered to at least 100,000 cells/mm³.
 - a. Prescribers may order warfarin daily at a low, maintenance daily dose (≤ 5 mg)
Do not give a loading dose of warfarin.
 - b. Adjust dose for approximate goal of INR 4-5 during the first 5 days of concomitant argatroban and warfarin
2. After 5 days of concomitant argatroban and warfarin therapy, decrease argatroban rate to 2 mcg/kg/min (if > 2 mcg/kg/min) and check INR:
 - A. If $\text{INR} \geq 4$, Discontinue argatroban and recheck INR in 6 hrs.
 1. If 2-3 (or within desired range), restart argatroban at 2 mcg/kg/min (or original rate if < 2 mcg/kg/min) and keep patient on same warfarin dose. Repeat process daily until INR off argatroban remains 2-3 for 2 consecutive days. Then discontinue argatroban.
 2. If > 3 (or above desired range), restart argatroban and reduce warfarin dose. Repeat process daily until INR is within range for 2 consecutive days. Then discontinue argatroban.
 3. If $\text{INR} < 2$, increase argatroban to original therapeutic rate. Increase warfarin dose and repeat process the next day.
 - B. If $\text{INR} < 4$, Return argatroban infusion to original therapeutic rate and increase warfarin dose. Check INR daily for 2 days.
 1. If after 2 days INR has not increased at all, increase warfarin dose and repeat process.
 2. If INR has increased_but still < 4 , repeat process at same warfarin dose until $\text{INR} \geq 4$, then follow as in # 1 above.
 3. If new $\text{INR} \geq 4$, follow as in number 1 above.