PowerPlan

Title: Bivalirudin for Mechanical Circulatory Support/High Intensity PowerPlan

INITIATE ON SIGN: (Initiates on Sign)

FACILITIES:

[ ] ALT [ ] BDK [ ] BED [ ] EAS [ ] HAM [ ] HZN [ ] MCK [ ] MER [ ] MWH [ ] NOR [ ] PAS [x] PUH [X] SHY [ ] SMH [ ] WPIC [ ] All Sites

ORDER CONTENT:

Precheck	Order:	Order Sentence Details:
Miscellaneous		
	Discontinue ALL forms of heparin (including LMWHs and heparin flushes	
	Discontinue ALL current warfarin orders	
	Notify physician if any of the following occur: • Hgb < 8 gm/dL or drop of > 2 gm/dL in 24 hours • Bleeding • aPTT > 90	
	If patient is on ECMO, please monitor aPTT every 6 hours while on bivalirudin therapy	
	Bivalirudin artificially elevates the INR. When transitioning to warfarin, please re-check INR after bivalirudin has been held for at least 2 hrs. If repeat INR is less than goal, please restart bivalirudin	
	Generate Bivalirudin for Mechanical Circulatory Support/High Intensity Form	
Medications		
	Bivalirudin Non-CRRT Protocol; 125mg/100ml	**0.025mg/kg/hr; STAT; Titration parameters: Titrate per Mechanical cardiac support/high-intensity nomogram**
	Bivalirudin CRRT Protocol; 125mg/100ml	**0.04mg/kg/hr; STAT; Titration parameters: Titrate per Mechanical cardiac support/high-intensity nomogram**
Labs		
	aPTT (if not done within last 12 hrs)	**STAT x1**
	aPTT	**Every 3 hr until 3 consecutive readings are therapeutic and then every 6 hr until therapeutic times 3 consecutive readings. Follow mechanical cardiac support/high-intensity nomogram**

ADDITIONAL NOTES:

- Initial ECMO orders to be ordered separately
- ECMO Bolus
  - **VA 0.5 mg/kg bolus**
  - **VV 0.3 mg/kg bolus**

    - **Exchange/wean 0.1 mg/kg bolus**

- Bivalirudin has a half-life of ~20 minutes (normal renal function) and as such will only need to be held for ~1 to 2 hours when being held for procedures such as chest tubes, central lines, etc.

UPMC

PHYSICIAN ORDER SET

AUTHORIZATION IS GIVEN TO THE PHARMACY TO DISPENSE AND TO THE NURSE TO ADMINISTER THE GENERIC OR CHEMICAL EQUIVALENT WHEN THE DRUG IS FILLED BY THE PHARMACY OF UPMC - UNLESS THE PRODUCT NAME IS CIRCLED.

IMPRINT PATIENT IDENTIFICATION HERE

Mechanical cardiac support/high-intensity nomogram, NON-CRRT (0.025 mg/kg/hr initial dose)	
Measured aPTT	**Recommendation**
< 45	**Increase infusion by 0.01 mg/kg/hr. Repeat STAT aPTT every 3 hours after rate change**
45 – 60	**Increase infusion by 0.005 mg/kg/hr. Repeat STAT aPTT every 3 hours after rate change**
61 – 75	**No change. After three (3) consecutive aPTT are within therapeutic range, repeat STAT aPTT q6h if rate remains unchanged. After three (3) consecutive aPTT are within therapeutic range, decrease aPTT monitoring to twice daily**
76 – 90	**Decrease infusion by 0.005 mg/kg/hr. Repeat STAT aPTT every 3 hours after rate change**
91 – 110	**Hold infusion for 2 hours, then decrease infusion by 0.01 mg/kg/hr. Repeat STAT aPTT every 3 hours after rate change**
> 110	**Hold infusion for 2 hours, recheck aPTT every three hours until within goal range, then decrease by 0.01 mg/kg/hr. Repeat STAT aPTT every 3 hours after rate change**

Mechanical cardiac support/high-intensity nomogram, CRRT (0.04 mg/kg/hr initial dose)	
Measured aPTT	**Recommendation**
< 45	**Increase infusion by 0.01 mg/kg/hr. Repeat STAT aPTT every 3 hours after rate change**
45 – 60	**Increase infusion by 0.005 mg/kg/hr. Repeat STAT aPTT every 3 hours after rate change**
61 – 75	**No change. After three (3) consecutive aPTT are within therapeutic range, repeat STAT aPTT q6h if rate remains unchanged. After three (3) consecutive aPTT are within therapeutic range, decrease aPTT monitoring to twice daily**
76 – 90	**Decrease infusion by 0.005 mg/kg/hr. Repeat STAT aPTT every 3 hours after rate change**
91 – 110	**Hold infusion for 2 hours, then decrease infusion by 0.01 mg/kg/hr. Repeat STAT aPTT every 3 hours after rate change**
> 110	**Hold infusion for 2 hours, recheck aPTT every three hours until within goal range, then decrease by 0.01 mg/kg/hr. Repeat STAT aPTT every 3 hours after rate change**

(**BLOCK** Print Name) (Signature)

Date / Time: Pager #

☐ **Order Set Faxed to Pharmacy by:** **Unit:** ____
(name / time)

Bivalirudin for Mechanical circulatory support/high-intensity									Warfarin			
Date	RN initials	Drip rate (mg/kg/hr)	Time started	RN initials	Time aPTT drawn	aPTT level	Next aPTT due	Action taken	RN initials	Time warfarin given	Warfarin dose (mg)	PT/INR value

aPTT	Action	
< 45	Increase previous infusion by 0.01 mg/kg/hr Repeat **STAT** aPTT 3 hours after rate change	= **increase** by _____ mg/kg/hr
46 to 60	Increase previous infusion by 0.005 mg/kg/hr Repeat **STAT** aPTT 3 hours after rate change	= **increase** by _____ mg/kg/hr
61 to 75	No change Repeat **STAT** aPTT in 3 hours. After three (3) consecutive aPTT are within therapeutic range, repeat STAT aPTT q6h if rate remains unchanged. After three (3) consecutive aPTT are within therapeutic range, decrease aPTT monitoring to twice daily	
76 to 90	Decrease previous infusion by 0.005 mg/kg/hr Repeat **STAT** aPTT 3 hours after rate change	= **decrease** by _____ mg/kg/hr
91 to 110	Hold infusion for 2 hours Decrease previous infusion by 0.01 mg/kg/hr Repeat **STAT** aPTT 3 hours after rate change	= **decrease** by _____ mg/kg/hr
> 110	Hold infusion for 2 hours Recheck aPTT every 3 hours until within goal range Decrease previous infusion by 0.01 mg/kg/hr Repeat **STAT** aPTT 3 hours after rate change	= **decrease** by _____ mg/kg/hr

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