

HEPARIN PROTOCOL

Deep Vein Thrombosis & Pulmonary Embolism

East Kootenay / Kootenay Boundary

Weight (kg)

Bulleted orders are initiated by default, unless crossed out and initialed by the physician/prescriber. Boxed orders () require physician/prescriber check mark () to be initiated.

HEPARIN & WARFARIN THROMBOSIS PROTOCOL (active DVT/PE)

1. CONCURRENT THERAPY

- If patient has an epidural infusing, call the Acute Pain Service for epidural orders prior to initiating heparin protocol
- No intramuscular injections
- If possible, avoid non-steroidal anti-inflammatory drugs (NSAIDs)
- Discontinue previous heparin and low molecular weight heparin orders (LMWH)

2. LABORATORY

- Baseline PTT, INR and CBC with platelet count (Day 1)
- CBC with platelet count Q2DAYS while on heparin
- PTT daily while on heparin, INR daily when initiating warfarin

3. IN ACUTE STROKE

- These patients should not receive a bolus dose of heparin

4. HEPARIN THERAPY

a) INITIAL HEPARIN THERAPY (no bolus if heparin or LMWH was given in the past 6 hours)

- heparin IV bolus over at least 1 minute as below:
- heparin IV infusion (using 25,000 units heparin in 500 mL of IV fluid = 50 units/mL) as below:

Patient Wt (kg)	Heparin IV Bolus (units)	Initial Infusion	Rate
<input type="checkbox"/> 50 or less	80 units/kg = _____ units	18 units/kg/hr = _____ units/hr	_____ mL/hour
<input type="checkbox"/> 51 to 60	5,000	1,000 units/hour	= 20 mL/hour
<input type="checkbox"/> 61 to 70	6,000	1,100 units/hour	= 22 mL/hour
<input type="checkbox"/> 71 to 90	7,000	1,300 units/hour	= 26 mL/hour
<input type="checkbox"/> 91 to 105	8,000	1,450 units/hour	= 29 mL/hour
<input type="checkbox"/> 106 to 120	9,000	1,650 units/hour	= 33 mL/hour
<input type="checkbox"/> greater than 120	80 units/kg = _____ units	18 units/kg/hr = _____ units/hr	_____ mL/hour

b) PTT ADJUSTED HEPARIN THERAPY

- PTT 6 hours after starting heparin, then adjust heparin infusion and repeat PTT according to below:

PTT (sec)	BOLUS DOSE IV	STOP INFUSION	RATE CHANGE (50 units / mL)	REPEAT PTT
less than 45	Repeat full bolus	0	+3 mL/hour (increase by 150 units/hour)	6 hours
45 to 60	Repeat half bolus	0	+2 mL/hour (increase by 100 units/hour)	6 hours
61 to 98 (Therapeutic)	0	0	0 (no change)	Next day
99 to 120	0	0	-2 mL/hour (decrease by 100 units/hour)	6 hours
121 to 150	0	30 min	-4 mL/hour (decrease by 200 units/hour)	6 hours
greater than 150	0	60 min	-6 mL/hour (decrease by 300 units/hour)	6 hours

***** CALL PHYSICIAN IF 3 CONSECUTIVE PTTs less than 45 SEC **OR** greater than 150 SEC *****

c) IF HEPARIN THERAPY (IV) IS INTERRUPTED (OUTSIDE OF THIS NOMOGRAM) FOR:

- Less than 1 hour – resume same infusion rate, repeat PTT in 6 hours
- Greater than 1 hour – repeat full IV bolus and resume same infusion rate, repeat PTT in 6 hours

5. WARFARIN THERAPY

- warfarin _____ mg PO DAILY x 2 days to start on _____.
- warfarin to be ordered on a daily basis thereafter by MRP
- Discontinue heparin after at least 5 days of combined heparin and warfarin therapy when INR greater than 2 (Physician order required)

Date (dd/mm/yyyy)	Time	Prescriber's Signature	Printed Name or College ID#
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