Physician Orders ADULT: Neuro Heparin Therapy Protocol Plan

Neuro Heparin Therapy Protocol Phase

Laboratory
- PTT
  - STAT, T:N, once, Type: Blood
  - Comments: To be used for Baseline-Heparin VTE Protocol
- CBC w/o Diff
  - STAT, T:N, once, Type: Blood
  - Comments: To be used Baseline - Heparin VTE Protocol
- H&H
  - Routine, T+1;0400, qam, Type: Blood
- Platelet Count
  - Routine, T+1;0400, qam, Type: Blood

Consults/Notifications/Referrals
- Notify Physician-Continuing
  - Notify For: if baseline or subsequent platelet counts fall below 100,000/mm3 or if there is a 50% drop from the baseline platelet count.

Medium Intensity Neuro Heparin Therapy

Nursing Communication
- Nursing Communication
  - Medium Intensity Neuro Heparin Protocol: DC all other forms of Heparin (enoxaparin, dalteparin,fondaparinux). If on full dose anticoagulation-delay Heparin bolus/infusion for 12 hrs after last dose. If on prophylactic Heparin doses, no delay necessary.
- Nursing Communication
  - Medium Intensity Neuro Heparin Protocol: Place order for aPTT Medium Intensity Neuro Heparin six hours after starting infusion (order as Time Study priority).
- Nursing Communication
  - Medium Intensity Neuro Heparin Protocol: Titration: place order for additional aPTT Medium Intensity Heparin q6h (Time Study) as indicated.
- Nursing Communication
  - Medium Intensity Neuro Heparin Protocol: Change order for aPTT Medium Intensity Heparin to qam after Heparin infusion begun and therapeutic range (PTT 60 - 80 seconds for MEDIUM INTENSITY) achieved.
- Nursing Communication
  - Medium Intensity Neuro Heparin Protocol: If patient has IM injection orders, call MD for clarification (IM injections not recommended while on Heparin; may vaccinate if aPTT Heparin less than 110 seconds.
- Nursing Communication
  - Medium Intensity Neuro Heparin Protocol: Do not interrupt Heparin Infusion to collect labs or collect from Heparin infusion IV line or distally from Heparin infusion line. Start second IV line access (INT) for blood draws if necessary.

Continuous Infusion

MEDIUM Intensity Neuro Heparin Therapy
- heparin 20,000 units/D5W infusion
  - 20,000 units / 500 mL, IV, NOW, titrate
  - Comments: Titration: If no bolus dose ordered, disregard comments regarding giving additional bolus and adjust infusion rate only Initiate heparin infusion at 1000 units/hr (25 mL/hr) and then titrate per below to a goal aPTT range of 60 to 80 seconds.
  - aPTT range: Action:
    - <= 44.9 sec  - Give additional 2000 unit bolus, then increase rate by 240 units/hr. (6 mL/hr) and repeat PTT q6 hours
    - 45-59.9 sec  - Increase rate by 120 units/hr (3mL/hr)and repeat PTT in 6 hrs
    - 60-80 sec  - Maintain same rate
    - 80.1-100 sec  - Decrease rate by 120 units/hr (3mL/hr) and repeat PTT in 6 hrs
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> 100 sec  Hold infusion for 1 hour then decrease rate by 240 units/hr (6mL/hr) and continue aPTT q6h after infusion resumed.

Medications

**MEDIUM Intensity Neuro Heparin Therapy**
- **heparin**
  - 2,000 units, Injection, IV Push, once, NOW
  - **Comments**: For aPTT goal of 60 - 80 secs ONLY.

- **heparin**
  - 2,000 units, Injection, IV Push, q6h, PRN Other, specify in Comment, NOW
  - **Comments**: PRN for PTT less than or equal to 44.9 secs; For aPTT Goal 60 - 80 sec ONLY.

Laboratory

- **aPTT Medium Intensity Neuro Heparin**
  - **Time Study, T;N, Type: Blood, Nurse Collect**

- **aPTT Medium Intensity Neuro Heparin**
  - **Time Study, T;N, Type: Blood, Nurse Collect**

Low Intensity Neuro Heparin Therapy

Nursing Communication

- **Nursing Communication**
  - *Low Intensive Neuro Heparin Therapy: DC all other forms of Heparin (enoxaparin, dalteparin,fondaparinux). If on full dose anticoagulation-delay Heparin bolus/infusion for 12 hrs after last dose. If on prophylactic Heparin doses, no delay necessary.*

- **Nursing Communication**
  - *Low Intensive Neuro Heparin Therapy: Place order for aPTT Low Intensity Neuro Heparin six hours after starting infusion (order as Time Study priority).*

- **Nursing Communication**
  - *Low Intensive Neuro Heparin Therapy: Titration: place order for additional aPTT Heparin q6h (Time Study) as indicated.*

- **Nursing Communication**
  - *Low Intensive Neuro Heparin Therapy: Change order for aPTT Low Intensity Neuro Heparin to qam after Heparin infusion begun and therapeutic range (PTT 40-60 seconds for LOW INTENSITY) achieved.*

- **Nursing Communication**
  - *Low Intensive Neuro Heparin Therapy: If patient has IM injection orders, call MD for clarification (IM injections not recommended while on Heparin; may vaccinate if aPTT Heparin less than 110 seconds).*

- **Nursing Communication**
  - *Low Intensive Neuro Heparin Therapy: Do not interrupt Heparin Infusion to collect labs or collect from Heparin infusion IV line or distally from Heparin infusion line. Start second IV line access (INT) for blood draws if necessary.*

Continuous Infusion

**LOW Intensity Neuro Heparin Therapy**

- **heparin**
  - 20,000 units/D5W infusion
  - 20,000 units / 500 mL, IV, NOW, titrate
  - **Comments**: Initiate heparin infusion at 880 units/hr (22 mL/hr) and then titrate per below to a goal aPTT range of 40 to 60 seconds. Do not bolus unless ordered by neurology/neurosurgery/neurocritical care.

  **aPTT range:**

<table>
<thead>
<tr>
<th>aPTT</th>
<th>Action</th>
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<tbody>
<tr>
<td>&lt;= 24.9 sec</td>
<td>Increase rate by 240 units/hr (6 ml/hr) and repeat PTT q6hrs</td>
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<tr>
<td>25-39.9 sec</td>
<td>Increase rate by 120 units/hr (3mL/hr) and repeat PTT in 6hrs</td>
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<tr>
<td>40-60 sec</td>
<td>Maintain same rate</td>
</tr>
<tr>
<td>60.1-75 sec</td>
<td>Decrease rate by 120 units/hr (3mL/hr) and repeat PTT in 6 hrs</td>
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<tr>
<td>&gt; 75 sec</td>
<td>Hold infusion for 1 hour then decrease rate by 240 units/hr (6mL/hr) and continue aPTT q6h after infusion resumed.</td>
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Laboratory
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<tbody>
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<tr>
<th>Date</th>
<th>Time</th>
<th>Physician’s Signature</th>
<th>MD Number</th>
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*Report Legend:*
- DEF - This order sentence is the default for the selected order
- GOAL - This component is a goal
- IND - This component is an indicator
- INT - This component is an intervention
- IVS - This component is an IV Set
- NOTE - This component is a note
- Rx - This component is a prescription
- SUB - This component is a sub phase, see separate sheet
- R-Required order