# Nursing Process Focus: Patients Receiving Heparin

## Assessment
Prior to administration:
- Obtain complete heath history including allergies, drug history and possible drug interactions.
- Assess baseline coagulation studies and CBC
- Assess for history of bleeding disorders, GI bleeding, cerebral bleed, recent trauma
- Obtain patient’s drug history including use of over the counter medications that might effect coagulation and assess allergies
- Assess for history of alcohol abuse

## Potential Nursing Diagnoses
- Injury, Risk for, (bleeding) related to side effects of anticoagulant medication
- Tissue perfusion, Risk for Ineffective, related to hemorrhage or venous thrombosis related to side effects of anticoagulant therapy

## Planning: Patient Goals and Expected Outcomes

The patient will:
- Remain free of unusual bleeding
- Maintain effective tissue perfusion

## Implementation

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<tr>
<th>Interventions and (Rationales)</th>
<th>Patient Education/Discharge Planning</th>
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| Monitor for bleeding. Check color of urine, occult blood in stool, and/or changes in vital signs. (Patients with history of peptic ulcer disease, alcoholism, kidney or liver disease, and the elderly are at greatest risk for bleeding) | Advise patient to:
- Use a soft toothbrush and an electric shaver.
- Avoid all contact sports while on heparin therapy.
- Report even minor injuries to the health care provider
- Wear identification stating patient is on anticoagulant therapy if they are receiving SQ heparin outside the hospital setting |
| Monitor PTT for therapeutic values (1 ½ -2 ½) baseline. | Explain to patient and caregivers rationale for frequent lab tests with IV heparin. |
| Encourage smoking cessation. (Nicotine decreases the effect of heparin. Patient should not smoke while on heparin therapy.) | Advise patient to avoid nicotine while on heparin therapy. |
| Monitor CBC in female patients who are menstruating. (Anticoagulation may cause excessive blood loss during menses.) | Advise patient that heparin may increase menstrual bleeding and to report any increased bleeding to the health care provider |
**Evaluation of Outcome Criteria**

Evaluate effectiveness of drug therapy by confirming that the patient goals and expected outcomes have been met (see “Planning”).
Nursing Process Focus:
Patients Receiving Warfarin (Coumadin)

**Assessment**
Prior to administration:
- Obtain complete health history including allergies, drug history and possible drug interactions.
- Assess baseline coagulation studies, albumin levels, PT/INR, CBC and possibility of pregnancy (category D)
- Assess for history of bleeding disorders, GI bleeding, cerebral bleed, recent trauma
- Obtain patient’s drug history including use of over the counter medications that might effect coagulation and assess allergies

**Potential Nursing Diagnoses**
- Injury, Risk for, (bleeding) related to adverse effects of anticoagulant therapy
- Gas exchange, Impaired related to increase in thrombosis
- Tissue perfusion, Risk for Ineffective related to effects of drug therapy

**Planning: Patient Goals and Expected Outcomes**
The patient will:
- Remain free of injury, including avoidance of unusual bleeding
- Demonstrate adequate respiratory function
- Maintain adequate tissue perfusion

**Implementation**

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<td>Monitor patient for any signs or symptoms of bleeding. (Bleeding chances increase with patient’s age. It must be used with caution in geriatric patients since, with aging, liver size and albumin levels decrease and more of the drug circulates unbound in the bloodstream.)</td>
<td>Instruct patient to look for occult signs of bleeding including changes in urine color (tea color can indicate bleeding) or stool color and odor (black, odorous stools can indicate bleeding).</td>
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| Monitor vital signs especially pulse and blood pressure. (This may indicate impending blood loss.) | Instruct patient to:
  - Monitor pulse and blood pressure regularly.  
  - Report increased heart rate and/or decreased blood pressure to health care provider |
| Monitor for safe administration and monitoring of medication by patient. | Advise patient to:
  - To use a soft toothbrush and an electric shaver while on warfarin therapy
  - That skipping a dose of warfarin could alter therapeutic levels of the medication.
  - To check with health care provider before omitting any dose |
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<th>To wear ID stating patient is on anticoagulant therapy</th>
<th>To keep all appointments for lab work</th>
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<tr>
<td>Provide instruction related to dietary considerations during Warfarin therapy.</td>
<td>Advise patient to eat consistent amounts of foods high in Vitamin K such as green leafy vegetables.</td>
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<td>(Vitamin K is the antidote for warfarin and is found in high quantity in green leafy vegetables.)</td>
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**Evaluation of Outcome Criteria**

Evaluate the effectiveness of drug therapy by confirming that patient goals and expected outcomes have been met (see “Planning”).
Nursing Process Focus:
Patients Receiving Abciximab (ReoPro)

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<tr>
<td>Prior to administration:</td>
<td>• Tissue perfusion, Risk for Ineffective, related to ineffectiveness of abciximab</td>
</tr>
<tr>
<td>• Obtain complete health history, including allergies, drug history and possible drug interactions.</td>
<td>• Injury, Risk for, (bleeding) related to adverse effects of abciximab</td>
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<tr>
<td>• Assess vital signs, APTT, PT, CBC, bleeding time</td>
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Planning: Patient Goals and Expected Outcomes

The patient will:
• Demonstrate adequate tissue perfusion throughout drug therapy
• Avoid occurrence of unusual or excessive bleeding

Implementation

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<td>• Monitor vital signs frequently during infusion. (Abciximab doubles risk of major bleeding especially if PCTA site is in the femoral artery)</td>
<td>• Advise patient that careful monitoring will be done while the medication is infusing to assess for hemorrhage.</td>
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<tr>
<td>• Monitor all potential bleeding sites such as old IV sites.</td>
<td>• Instruct patient to report any bleeding from I.V. or other puncture sites.</td>
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<td>• Assist with cardiac monitoring. (Patient must be on cardiac monitor during infusion, dysrhythmias may occur with reperfusion.)</td>
<td>• Advise patient of rationale for cardiac monitoring.</td>
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<tr>
<td>• Monitor for evidence of excessive bleeding, symptoms of stroke. (Medication is give in conjunction with aspirin and heparin to facilitate revascularization in acute coronary syndrome.)</td>
<td>Advise patient to:</td>
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<td>• Notify the health care provider at the first sign of bleeding</td>
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<td>• Immediately report severe headache, visually changes or changes in sensorium</td>
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<tr>
<td>• Monitor Hgb, Hct, platelets, PT / INR, APTT every 2-4 hours during first 24 hours. Discontinue medication and heparin if severe bleeding occurs.</td>
<td>• Advise patient of rationale for frequent lab assessments.</td>
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Evaluation of Outcome Criteria

Evaluate the effectiveness of drug therapy by confirming that patient goals and expected outcomes have been met (see “Planning”).
### Nursing Process Focus:

**Patients Receiving Aminocaproic Acid (Amicar)**

#### Assessment

Prior to administration:
- Obtain complete health history, including allergies, drug history, and possible drug interactions.
- Assess for active bleeding.
- Assess vital signs.
- Assess lab values; APTT, PT, Hgb, Hct, platelet count.
- Assess potassium level if patient has renal problems.

#### Potential Nursing Diagnoses

- Tissue perfusion, Ineffective related to adverse effects of aminocaproic acid.
- Injury, Risk for related to adverse effects of aminocaproic acid.
- Knowledge deficient related to action and side effects of aminocaproic acid.

#### Planning: Patient Goals and Expected Outcomes

The patient will:
- Demonstrate knowledge of drug action and side effects.
- Maintain adequate tissue perfusion.
- Remain free of excessive bleeding.

#### Implementation

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<td>Monitor respiratory status and peripheral pulses. (May cause unwanted clotting in extremity or pulmonary system, patients with history of thrombotic disorders or pulmonary emboli. If unwanted clotting occurs, drug should be discontinued immediately.)</td>
<td>Advise patient to report to health care provider the first sign of any shortness of breath, chest pain, or pain in an extremity.</td>
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<tr>
<td>Maintain integrity of I.V. site. Make sure IV is securely in vein. (Always check for blood return before beginning therapy to prevent thrombophlebitis.)</td>
<td>Advise patient to immediately report any burning at the IV site.</td>
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<tr>
<td>Discontinue therapy immediately if patient develops muscle weakness or reddish brown urine. Monitor urine output. (These symptoms signal myopathy and myoglobinuria.)</td>
<td>Advise patient to report any difficulty urinating or the development of any reddish brown urine.</td>
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#### Evaluation of Outcome Criteria

Evaluate the effectiveness of drug therapy by confirming that patient goals and expected outcomes have been met (see “Planning”).
### Nursing Process Focus:
Patients Receiving Alteplase

#### Assessment
Prior to administration:
- Obtain complete health history, including allergies, drug history, and possible drug interactions.
- Assess lab values; APTT, PT, Hgb, Hct, platelet count
- Assess vital signs
- Assess for menses in women, recent surgery or trauma, bleeding disorders, or history of hemorrhagic stroke or GI bleeding

#### Potential Nursing Diagnoses
- Injury, Risk for (bleeding) related to adverse effects of thrombolytic therapy
- Cardiac Output, Risk for Decreased, related to reperfusion of myocardium
- Tissue perfusion, Risk for Ineffective, related to increase in size of thrombus or ineffective effect of thrombolytic therapy
- Knowledge deficient related to thrombolytic therapy

#### Planning: Patient Goals and Expected Outcomes
The patient will:
- Avoid occurrence of excessive bleeding
- Demonstrate knowledge of drug action and side effects
- Maintain effective tissue perfusion
- Maintain vital signs within normal limits

#### Implementation

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| Monitor vital signs every 15 minutes during first hour of infusion, then every 30 minutes during remainder of infusion. (Patient is at risk for excessive bleeding during revascularization.) | Advise patient:  
- Regarding need for frequent vital signs.  
- That activity will be limited during infusion and pressure dressing may be needed to prevent any active bleeding  |
| Patient should be moved as little as possible during the infusion to prevent internal injury |  |
| Monitor neurological status frequently (massive cerebral hemorrhage could occur). | Instruct patient:  
- About assessments and why they are necessary  
- To report change in sensorium, headache, visual changes  |
| Assist with monitoring cardiac rate and rhythm while medication is infusing. (Dysrhythmias may occur with reperfusion of myocardium.) |  
- Advise patient that cardiac rhythm will be monitored during therapy.  |
| Start IV lines and insert foley catheter prior to beginning therapy (to decrease chance of bleeding from those sites). |  
- Inform patient about procedures and why they are necessary.  |
- Monitor CBC during and after therapy (for indications of blood loss due to internal bleeding). Patient has increased risk of bleeding for 2-4 days post infusion.
- Instruct patient of increased risk for bleeding, activity restriction, and frequent monitoring during this time.

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