### Nursing Process Focus: Patients Receiving Cyanocobalamin (Cyanabin)

#### ASSESSMENT

Prior to administration:
- Obtain complete health history including allergies, drug history, and possible drug reactions.
- Assess vital signs.
- Assess for other causes of anemia.

#### POTENTIAL NURSING DIAGNOSES

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>- Risk for Injury (weakness, dizziness, syncope), related to anemia</td>
<td></td>
</tr>
<tr>
<td>- Ineffective Tissue Perfusion, related to adverse effects of drug therapy</td>
<td></td>
</tr>
<tr>
<td>- Deficient Knowledge, related to drug therapy</td>
<td></td>
</tr>
</tbody>
</table>

#### PLANNING: PATIENT GOALS AND EXPECTED OUTCOMES

The patient will:
- Report a decrease in symptoms of vitamin B₁₂ deficiency
- Immediately report significant side effects such as dyspnea, palpitations, fatigue, muscle weakness, and dysrhythmias
- Demonstrate an understanding of the drug’s action by accurately describing drug side effects and precautions

#### IMPLEMENTATION

<table>
<thead>
<tr>
<th>Interventions and (Rationales)</th>
<th>Patient Education/Discharge Planning</th>
</tr>
</thead>
</table>
| - Monitor vital signs.  
  (Altered potassium levels and overexertion may produce cardiovascular complications, especially irregular rhythm.) | - Instruct patient to monitor pulse rate and report irregularities and changes in rhythm. |
| - Monitor potassium levels during first 48 hours of therapy.  
  (Conversion to normal red blood cell production increases the need for potassium.) | - Instruct patient on the need for initial and continuing laboratory blood monitoring, and to keep all laboratory appointments. |
| Monitor respiratory pattern.  
(Pulmonary edema may occur early in therapy related to a possible sensitivity to the drug. Reactions may take up to 8 days to occur.) | Instruct patient to immediately report any respiratory difficulty. |
| Monitor serum vitamin B₁₂, RBCs, and hemoglobin levels to determine effectiveness of drug. (Initial doses of B₁₂ stimulate rapid RBC regeneration and should return to near normal within 2 weeks.) | Advise patient that treatment for pernicious anemia (usually IM injection) must be continued throughout life to prevent neurologic damage. |
| Assist patient to plan activities and allow for periods of rest to conserve energy. | Instruct patient to rest when they begin to feel tired and avoid strenuous activities. |
| Encourage patient to maintain adequate dietary intake of essential nutrients and vitamins. | Instruct patient:  
- That dietary control, by itself, is not possible in treating pernicious anemia  
- To consume adequate dietary intake of essential nutrients and vitamins |
| Monitor for side effects such as palpitations, fatigue, muscle weakness, and dysrhythmias. Report immediately | Teach patient to immediately report side effects to their healthcare provider. |

**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 Ferrous Sulfate (Ferralyn)**

<table>
<thead>
<tr>
<th>ASSESSMENT</th>
<th>POTENTIAL NURSING DIAGNOSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior to administration:</td>
<td>■ Risk for Imbalanced Nutrition, related to inadequate iron intake</td>
</tr>
<tr>
<td>■ Obtain complete health history including allergies, drug history, and possible drug reactions.</td>
<td>■ Risk for Impaired Gas Exchange, related to low RBC count resulting in decreased oxygenation</td>
</tr>
<tr>
<td>■ Assess reason for drug administration such as presence/history of anemia, or prophylaxis during infancy, childhood, and pregnancy.</td>
<td>■ Risk for Injury (weakness, dizziness, syncope), related to anemia</td>
</tr>
<tr>
<td>■ Assess complete blood count specifically hematocrit and hemoglobin levels, to establish baseline values.</td>
<td>■ Deficient Knowledge, related to drug therapy</td>
</tr>
<tr>
<td>■ Assess vital signs.</td>
<td></td>
</tr>
</tbody>
</table>

**PLANNING: PATIENT GOALS AND EXPECTED OUTCOMES**

The patient will:

■ Exhibit an increase in hematocrit level and improvement in anemia-related symptoms

■ Demonstrate an understanding of the drug’s action by accurately describing drug side effects and precautions

■ Immediately report significant side effects such as gastrointestinal distress

**IMPLEMENTATION**

<table>
<thead>
<tr>
<th>Interventions and (Rationales)</th>
<th>Patient Education/Discharge Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ Monitor vital signs especially pulse. (Increased pulse is an indicator of decreased oxygen content in the blood.)</td>
<td>■ Instruct patient to monitor pulse rate and report irregularities and changes in rhythm.</td>
</tr>
<tr>
<td>Task</td>
<td>Instructions</td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| 1. Monitor complete blood count to evaluate effectiveness of treatment. (Increases in hematocrit and hemoglobin values indicate increased RBC production.) | Instruct patient:  
- On the need for initial and continuing laboratory blood monitoring  
- To keep all laboratory appointments |
| 2. Monitor changes in stool. (May cause constipation, change stool color, and cause false positives when stool tested for occult blood.) | Instruct patient:  
- That stool color may change and this is not a cause for alarm  
- On measures to relieve constipation, such as including fruits and fruit juices in diet and increasing fluid intake and exercise |
| 3. Plan activities and allow for periods of rest to help patient conserve energy. (Diminished iron levels result in decreased formation of hemoglobin leading to weakness.) | Instruct patient to:  
- Rest when they are feeling tired and not to overexert |
| 4. Administer medication on an empty stomach (if tolerated) at least 1 hour before bedtime. (Maximizes absorption; taking closer to bedtime may increase the chance of GI distress.) | Instruct patient:  
- Not to crush or chew sustained-release preparations  
- That medication may cause GI upset  
- To take medication with food if GI upset becomes a problem  
- To take at least 1 hour before bedtime |
| 5. Administer liquid iron preparations through a straw or place on the back of the tongue (to avoid staining the teeth). | Instruct patient to:  
- Dilute liquid medication before using and to use a straw to take medication  
- Rinse the mouth after swallowing to decrease the chance of staining the teeth |
- Monitor dietary intake to ensure adequate intake of foods high in iron.
- Instruct patient to increase intake of iron-rich foods such as liver, egg yolks, brewer’s yeast, wheat germ, and muscle meats.
- Monitor for potential for child access to medication. (Iron poisoning can be fatal to young children.)
- Advise parents to store iron-containing vitamins out of reach of children and in childproof containers.

**EVALUATION OF OUTCOME CRITERIA**

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