### Nursing Process Focus
**Patients Receiving Morphine**

#### Assessment
Prior to administration:
- Obtain complete medical history including allergies, pulmonary, cardiac, renal, biliary, and mental or sleep disorders, including EKG and laboratory studies: CBC, BUN, creatinine, electrolytes, liver function tests (AST, Amylase, bilirubin).
- Obtain patient’s drug history to determine possible drug interactions and allergies
- Assess respiratory function.
- Assess LOC and pain.

#### Potential Nursing Diagnoses
- Knowledge deficient, related to drug action and side effects
- Pain, Acute
- Breathing pattern, Ineffective, related to sedation effect of drug
- Constipation, related to drug action
- Sleep Pattern disturbed (increased sleep), related to drug effect

#### Planning: Patient Goals and Expected Outcomes
The patient will:
- Report pain relief or a reduction in pain intensity.
- Demonstrate understanding of the drug's action by accurately describing drug side effects and precautions.
- Immediately report effects such as untoward or rebound pain, restlessness, anxiety, depression, hallucination, nausea, dizziness, and itching
- Maintain respiratory rate at least twelve beats per minute
- Maintain bowel function within normal pattern

#### Implementation

<table>
<thead>
<tr>
<th>Interventions and (Rationales)</th>
<th>Patient Education/Discharge Planning</th>
</tr>
</thead>
</table>
| Monitor vital signs. Cardiac output and central venous pressure may be needed. Assist with monitoring according to cardiac care unit (CCU) or emergency department (ED) protocols. | Instruct the patient:  
- That feeling dizzy or light-headed can be the result of analgesia, or coronary ischemia  
- To report episodes of severe dizziness or impending syncope immediately.  |
| Monitor liver enzymes and observe the patient for abdominal distention, tenderness and rigidity. (Morphine may intensify or mask the pain of gallbladder disease. Morphine can cause anorexia, nausea and vomiting, and may trigger biliary tract spasms. Morphine also raises serum amylase levels.) | Instruct the patient to:  
- Report any history or symptoms of biliary tract or liver disease, such as cholecystectomy.  
- Report signs and symptoms of hepatic toxicity: nausea, vomiting, diarrhea, rash, jaundice, abdominal pain, tenderness or distention, or change in color of stool  
- Adhere to the schedule of laboratory testing for liver function as ordered by the health care provider. |
- Monitor vital signs, especially depth and rate of respirations and pulse oximetry. (Opioids interact with receptors in the brain; respiratory depression and cardiac arrest may occur.)

  Instruct patient or caregiver to:
  - Monitor vital signs regularly, particularly respirations.
  - Withhold medication for any difficulty in breathing or respirations below 12 breaths per minute.

- Keep resuscitative equipment and narcotic-agonist (naloxone) medication at hand. Withhold the drug if the patient's respiratory rate below 12.

  Inform patient and caregivers concerning need for resuscitative equipment and rationale for frequent monitoring of respiratory rate.

**Monitor neurological status**

- Perform neuro-checks regularly. Monitor changes in level of consciousness (LOC). (Decreased LOC and sluggish pupillary response may occur with high doses. May cause increased CO2 content of blood, dilating cerebral vessels causing ICP.). Observe for seizures.

  Instruct the patient to:
  - Report headache or any significant change in sensorium, such as an aura or other visual affects that may indicate an impending seizure.
  - The possibility of seizures and methods to ensure personal safety during a seizure.
  - Report any seizure activity immediately to the nurse or health care provider.

- Interview patient regarding the location, quality, intensity, and frequency or duration of pain; use a nominal scale to determine intensity. (Administer medication before pain becomes intense to help keep pain under control.)

  Instruct the patient:
  - Alert the nurse immediately upon the return or increase of pain.
  - Notify the health care provider regarding the drug's effectiveness.

- Monitor renal status and urinary output. (May cause urinary retention due to muscle relaxation in urinary tract. Opiates are excreted through the kidneys. Impaired kidney function may result in reduced medication clearance and increased serum drug levels. Urinary retention may exacerbate existing symptoms of prostatic hypertrophy.)

  Instruct patient or caregiver to:
  - Measure and monitor fluid intake and output.
  - Notify the health care provider for any symptoms of dysuria (hesitancy, pain, diminished stream), changes in urine quality or scanty urine output.
  - Notify the health care provider of fever or flank pain that may be indicative of a urinary tract infection related to urinary retention.

- Monitor for side effects such as restlessness, dizziness, anxiety, depression, hallucinations. (Opiates bind mu and kappa receptors in the brain and spinal cord. Stimulation of chemoreceptors in the GI tract may produce nausea and vomiting.)

  Instruct patient or caregiver to:
  - Report any side effects and symptoms of an allergic or anaphylactic reaction.
  - Immediately report any shortness of breath, tight feeling in the throat, itching, hives or other rash, feelings of dysphoria, nausea or vomiting.
  - Avoid the use of sleep-inducing over-the-counter antihistamines, without first consulting the health care provider.
- Monitor for constipation. (Opioids have an antispasmodic effect on the GI tract, which decreases peristaltic activity. May need to increase dietary fiber or administer laxatives.)

  Instruct patient:
  - Maintain an adequate fluid and fiber intake to facilitate stool passage.
  - A stool softener and/ or laxative may be necessary; consult health care provider.

- Ensure patient safety. Raise bed rails and place call bell within patient's reach and monitor ambulation.

  Instruct patient to:
  - Request assistance when getting out of bed
  - Avoid activities that require mental alertness and physical coordination until effect of drug is known

- Monitor for tolerance/dependence. (Continued long-term use of opioids results in tolerance to the drug's desired effect and physical dependence on the drug itself. Increased dosing or administration route changes may be required to maintain analgesia. Cross-tolerance may also develop to other narcotics such as methadone, meperidine and heroin.)

  Inform patient:
  - That with continued therapy, dosing or drug administration routes may need to be changed to produce the same level of pain relief.
  - Regarding cross-tolerance issues.
  - Concerning the issue of drug-dependence from the perspective of reduced life-expectancy.
  - To inform caregivers to monitor medication supply to observe for hoarding, which may signal an impending suicide attempt.

**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 Naloxone

Assessment

Prior to administration:
- Obtain complete medical history: pulmonary, cardiac, renal, biliary, and mental disorders, including EKG and chest x-ray, pulse oximetry, laboratory studies: CBC, BUN, creatinine, electrolytes, arterial blood gases, etc.
- Obtain patient’s social and drug history to determine drug usage patterns, possible hypersensitivity, possible pregnancy and lactation.
- Assess for respiratory dysfunction/depression (character, rhythm, and rate of less and 10 breaths/minute).
- Assess for LOC and pain before and after administration.

Potential Nursing Diagnoses

- Breathing pattern, Ineffective, related to drug effect
- Airway clearance, Ineffective, related to sedation effect of drug
- Ventilation, Impaired spontaneous related to respiratory depression
- Aspiration, Risk for related to decreased airway clearance
- Tissue perfusion, Ineffective related to decreased ventilation

Planning: Patient Goals and Expected Outcomes

The patient will:
- Maintain a respiratory rate of 12 breaths per minute or more.
- Demonstrate understanding of the drug's action by accurately describing the drug's side-effects and precautions.
- Demonstrate ability to effectively clear airway
- Avoid aspirating gastric content or oral fluids
- Demonstrate adequate tissue perfusion

Implementation

<table>
<thead>
<tr>
<th>Interventions and (Rationales)</th>
<th>Patient Education/Discharge Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitor vital signs, including respirations, cardiac output, central venous pressure, etc. (per ICU/ED protocol).</td>
<td>Inform patient or caregiver that the drug's purpose is to restore respiratory capacity.</td>
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<td>Monitor tissue perfusion. Obtain ABGs including PO2 and PCO2 before and after administration. (Low PO2 may indicate the need for mechanical ventilation.)</td>
<td>Inform patient or caregiver that: Despite naloxone therapy, mechanical ventilation may still be necessary. Arterial blood gases are used as guidelines for determining the patient's need for respiratory support.</td>
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<td>Monitor neurological status and level of pain. Monitor mental status and observe for changes in LOC and adverse effects such as persistent drowsiness, hallucinations or suicidal ideation. Perform neurochecks according to</td>
<td>Instruct patient to inform the nurse regarding a return or worsening of pain, any changes in sensorium or feelings of dysphoria.</td>
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| Monitor for signs of acute drug withdrawal such as extreme anxiety, ventricular tachycardia, hypertension nausea and vomiting, or muscle cramping. (Withdrawal symptoms are precipitated by rebound stimulation of the CNS.) | Instruct the patient or caregiver that:  
- Naloxone is indicated for *emergency* use, and is not intended as a low-risk or ordinary back-up for opiate binges.  
- Withdrawal produced by opiate antagonists is more severe, and therefore can be more agonizing and dangerous than spontaneous withdrawal. |
|---|---|
| Use with caution in patients with cardiac disease. (The effect of naloxone on the central nervous system results in the massive release of catecholamines, which causes blood volume to shift into the pulmonary vasculature. This vascular congestion may result in pulmonary edema. This shift also increases cardiac workload.) | Instruct the patient to:  
- Immediately report any shortness of breath or a productive cough with frothy sputum (signs of pulmonary edema).  
- Immediately report any angina-like symptoms: chest, arm or back pain or pressure, dizziness, nausea, diaphoresis, etc. |

**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 Aspirin**

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<tr>
<th><strong>Assessment</strong></th>
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| Prior to administration:  
  - Obtain complete medical history including allergies, cardiac, renal, gastro-intestinal, biliary, and hematologic, including chest x-ray, laboratory studies: CBC, PT, PTT, BUN, creatinine, electrolytes, liver enzymes, etc.  
  - Obtain patient’s drug history to determine pain and analgesic usage patterns, possible hypersensitivity, possible pregnancy and lactation.  
  - Identify infectious agents or other factors responsible for inflammation or pain; |  
  - Pain (acute and chronic), related to tissue damage or inflammatory process  
  - Knowledge Deficient, related to drug action and side effects  
  - Altered Health Maintenance, related to unrelieved pain |

**Planning: Patient Goals and Expected Outcomes**

The patient will:  
- Report pain relief or a reduction in pain intensity.  
- Demonstrate understanding of the drug's action by accurately describing drug side effects and precautions.  
- Immediately report effects such as unresolved, untoward or rebound pain, persistent fever, blurred vision, tinnitus, bleeding, changes in color of stool or urine.

**Implementation**

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  - Exercise extreme caution in administering ASA to children and teenagers. (ASA has been implicated in the development of Reye's syndrome in conjunction with "flu-like" illnesses. Febrile, dehydrated children can rapidly develop ASA toxicity.) |  
  - Instruct the patient or caregiver to:  
    - Always first choose a non-aspirin preparation to treat fever.  
    - Consult the health care provider immediately if the non-aspirin antipyretic is ineffective.  
    - Be aware of hidden sources of ASA in over-the-counter medications such as menstrual pain relief compounds and "pink bismuth liquid" for gastrointestinal distress. |
|  
  - Monitor vital signs, especially temperature. (Increased pulse and BP may indicate discomfort; accompanied by pallor and/or dizziness may indicate bleeding.) |  
  - Instruct the patient:  
    - Report rapid heartbeat, palpitations, dizziness or pallor.  
    - Monitor blood pressure and temperature ensuring proper use of home equipment. |
- Monitor for signs of gastrointestinal bleeding or hepatic toxicity, specifically guiac stool testing for occult blood and CBC for signs of anemia. (ASA is a local irritant to the GI tract with anticoagulant action that is metabolized in the liver.)

  - Instruct the patient to:
    - Report any frank bleeding, abdominal pain, anorexia, heartburn, nausea, vomiting, jaundice or a change in the color or character of stools.
    - Adhere to a regimen of laboratory testing as ordered by the health care provider.
    - Keep all follow-up appoints as directed by the health-care provider.

  - Inform patient that
    - Vomiting brown emesis that looks like coffee grounds or passing tarry stools are signs of gastrointestinal bleeding.
    - The method of obtaining stool samples and home testing for occult blood as indicated by the health care provider.

  - Obtain character, duration, location, and intensity of pain and the presence of inflammation.

  - Instruct patient notify nursing personnel if pain and/or inflammation remains unresolved.


  - Advise the patient to immediately report shortness of breath, wheezing, tightness in the throat, itching or hives. Advise the patient to stop taking ASA immediately and inform the health care provider.

  - Monitor urinary output and edema in feet/ankles. (Medication is excreted through the kidneys. Long term use may lead to renal dysfunction.)

  - Instruct patient to report changes in urination, flank pain or pitting edema immediately.

  - Monitor CBC, BUN, creatinine, and urinalysis.

  - Monitor for sensory changes indicative of drug toxicity: tinnitus, blurred vision.

  - Advise the patient to immediately report any sensory changes in sight or hearing, especially blurry vision or "ringing in the ears."

  - Evaluate blood salicylate levels, especially in the elderly. (Elderly patients are particularly at risk due to diminished kidney and liver function related to aging.)

  - Ensure that patient knows to adhere to the schedule of laboratory testing for liver function as ordered by the health care 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 Sumatriptan*

### Assessment
Prior to administration:
- Obtain complete medical history including allergies, cardiac, renal, gastro-intestinal, biliary, and hematologic, including EKG, X-ray, tomography and laboratory studies: CBC, cardiac enzymes, BUN, creatinine, electrolytes, liver enzymes, etc.
- Obtain patient’s drug history to determine pain and analgesic usage patterns, possible hypersensitivity, possible pregnancy and lactation.
- Identify infectious agents or other factors responsible for inflammation or pain.
- Assess for LOC and pain before and after administration.

### Potential Nursing Diagnoses
- Pain, Acute
- Knowledge Deficient, related to drug action and side effects
- Coping, Ineffective related to unrelieved pain
- Health Maintenance, Ineffective, related to unrelieved pain

### Planning: Patient Goals and Expected Outcomes
The patient will:
- Report pain relief or a reduction in pain intensity.
- Demonstrate understanding of the drug's action by accurately describing drug side effects and precautions.
- Immediately report effects such as shortness of breath, chest tightness or pressure, jaw pain, untoward or worsened rebound headache, seizures or other neurological changes.
- Demonstrate ability to manage health needs

### Implementation

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<td>• Monitor vital signs, especially blood pressure and pulse. (Sumatriptan's systemic vasoconstrictor activity results in a rise in blood pressure and may result in arrhythmias or myocardial infarction.)</td>
<td>• Instruct patients to monitor vital signs, especially blood pressure and pulse, ensuring proper use of home equipment.</td>
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<td>• Observe for changes in severity, character or duration of headache. (Sudden severe headaches of &quot;Thunderclap&quot; quality can signal subarachnoid hemorrhage. Headaches which differ in quality and are accompanied by signs such as fever, rash, stiff neck, etc. may herald meningitis.)</td>
<td>Instruct the patient:</td>
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<td>• Monitor changes in neurological status; perform neuro-checks, esp LOC, regularly (Sumatriptan selectively reduces carotid arterial blood flow.)</td>
<td>• That changes in the character of migraines could signal other potentially more serious disorders.</td>
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<td>• Concerning warning signs of stroke;</td>
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<td>• Regarding conditions such as meningitis which may cause headache.</td>
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<td>Instruct the patient to:</td>
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<td>• Report episodes of severe dizziness or impending syncope immediately. Feeling dizzy or light-headed can be the result of</td>
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<td>• Observe for seizures.</td>
<td>the drug's action on the CNS, OR coronary ischemia.</td>
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<td>• Review emergency response and safety measures in the event of a seizure.</td>
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<tr>
<td>• Monitor for possible side effects: dizziness drowsiness, warming sensation, tingling, lightheadness, weakness or neck stiffness due to vasoconstriction. (Such symptoms can result from decreased blood flow to the brain related to reduced carotid arterial blood supply.)</td>
<td>Advise patient to:</td>
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<td>• Immediately report side effects to the health care provider. Regarding emergent symptoms suggestive of stroke or myocardial infarction, which may require immediate emergency intervention and transport to a hospital.</td>
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<td>• Monitor dietary intake of foods that contain tyramine such as pickled foods, beer, wine, aged cheese which may trigger migraines.</td>
<td>Instruct the patient to:</td>
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<td>• Avoid or limit foods containing tyramine.</td>
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<tr>
<td>• Monitor laboratory tests such as CBC, BUN, creatinine, urinalysis and liver enzymes to determine kidney and liver function. (Sumatriptan is metabolized in the liver and excreted by the kidneys; impaired organ function can increase serum drug levels.) Report immediately.</td>
<td>Instruct the patient to:</td>
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<td>• Report nausea, vomiting, diarrhea, rash, jaundice, abdominal pain, tenderness, distention, or change in color of stool.</td>
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<td>• Adhere to laboratory testing regimen for serum blood level tests of liver enzymes as directed.</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”).