Al-Zahraa University for women
Health and Medical Technology College
Department of Anesthesiology

Nursing Science

Postoperative nursing care (Part Three)

Learning objectives

After completing this lecture, the students will be able to:

- **Describe the responsibilities of the post-anesthesia care unit nurse in the prevention of immediate postoperative complications.**
- **Compare postoperative care of the ambulatory surgery patient with that of the hospitalized surgery patient.**
- **Describe variables that affect wound healing and postoperative dressing techniques.**

Postoperative Nursing Care:

- The postoperative period extends from the time the patient leaves the operating room (OR) until the last follow-up visit with the surgeon.
- May be as short as a day or two or as long as several months.
- Nursing care focuses on reestablishing the patient's physiologic equilibrium, alleviating pain, preventing complications, and teaching the patient self-care.

Post-anesthesia care unit (PACU)

- The **post-anesthesia care unit (PACU), is** also called the *recovery room* or *post-anesthesia recovery room*.
- Transferring the postoperative patient from the OR to the PACU is the responsibility of the anesthesiologist.
- The anesthesiologist provider remains at the head of the stretcher (to maintain the airway), and a surgical team member remains at the opposite end (attention to surgical incision site, drainage tube).
- Transporting the patient involves special consideration of the incision site, and potential vascular changes (Orthostatic hypotension may occur when a patient is moved too quickly, and exposed. All side rails may be raised to prevent falls.
- Patients may remain in a PACU unit for as long as 4 to 6 hours, depending on the type of surgery and any pre-existing conditions.

- The nursing management objectives for the patient in the PACU are to provide care until the patient has recovered from the effects of anesthesia (e.g., until the resumption of motor and sensory functions), is oriented, has stable vital signs, and shows no evidence of hemorrhage or other complications.

Nursing Management in the PACU

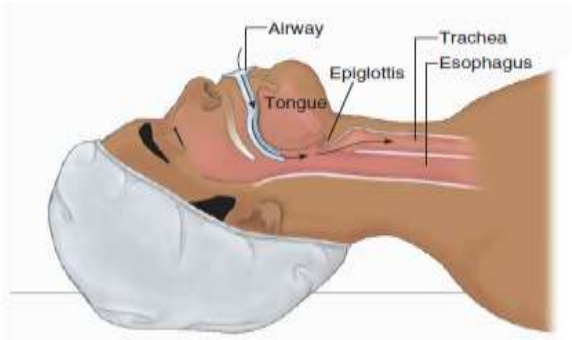
1. Assessing the Patient:

- Assessments of the patient's airway, respiratory function, cardiovascular function, skin color, level of consciousness, and ability to respond to commands
- The nurse performs and documents a baseline assessment, then checks the surgical site for drainage or hemorrhage and makes sure that all drainage tubes and monitoring lines are connected and functioning
- The nurse checks any intravenous (IV) fluids or medications currently infusing and verifies dosage and rate.

✓ Maintaining a Patent Airway:

- Patients who have experienced prolonged anesthesia usually are unconscious, with all muscles relaxed. This relaxation extends to the muscles of the pharynx hypopharyngeal obstruction.
- Hypopharyngeal obstruction. Signs of occlusion include choking; noisy and irregular respirations; decreased oxygen saturation scores; and within minutes, a cyanosis of the skin
- Tilting the head back and pushing forward on the angle of the lower jaw to open the airway.

- The anesthesiologist may leave a hard rubber or plastic airway in the patient's mouth to maintain a patent airway (See Fig.). Such a device should not be removed until signs such as gagging indicate that reflex action is returning.



- The head of the bed is elevated 15 to 30 degrees unless contraindicated, and the patient is closely monitored to maintain the airway
- Pt may require suctioning if Mucus or vomitus, turn your head to the side
  - ☒ Caution is necessary in suctioning the throat of a patient who has had a tonsillectomy or other oral or laryngeal surgery because of the risk of bleeding and discomfort

✓ Maintaining Cardiovascular Stability

- The nurse assesses the patient's mental status; vital signs; cardiac rhythm; skin temperature, color, and moisture; and urine output
- The nurse also assesses the patency of all IV lines.
- The primary cardiovascular complications seen in the PACU include: **hypotension and shock, hemorrhage, hypertension, and dysrhythmias.**

1. Hypotension and Shock:

- Hypotension can result from blood loss, hypoventilation, position changes, pooling of blood in the extremities, or side effects of medications and anesthetics.
- The primary intervention for hypovolemic shock is volume replacement, with an infusion of lactated Ringer solution, 0.9% sodium chloride solution, colloids, or blood component therapy to elevate BP

2. Hemorrhage:

- The patient signs: hypotension; rapid, thready pulse; disorientation; restlessness; oliguria; and cold, pale skin; dropped hemoglobin, shock, and death.
- Transfusing blood products and determining the cause of hemorrhage are the initial therapeutic measures

- If bleeding is evident, a sterile gauze pad and a pressure dressing are applied, and the site of the bleeding is elevated to heart level if possible. The patient is placed in the shock position (flat on back; legs elevated at a 20-degree angle; knees kept straight).
- If hemorrhage is suspected but cannot be visualized, the patient may be taken back to the OR for emergency exploration of the surgical site.

3. Hypertension and Dysrhythmias:

- Hypertension is common in the immediate postoperative period secondary to sympathetic nervous system stimulation from pain, hypoxia, or bladder distention. Dysrhythmias are associated with electrolyte imbalance, altered respiratory function, pain, hypothermia, stress, and anesthetic agents.

✓ **Relieving Pain and Anxiety:**

- Assess the patient's physiologic status, manage pain, and provide psychological support in an effort to relieve the patient's fears and concerns. Opioid analgesics are administered; usually short-acting opioids by IV route for immediate pain relief
- When the patient's condition permits, a close family member may visit the PACU to decrease the family's anxiety.

✓ **Controlling Nausea and Vomiting**

Intervene at the first indication of nausea to control the problem, many medications are available to control postoperative nausea and vomiting, deep breathing.

Nursing Alert

At the slightest indication of nausea, the patient is turned completely to one side to promote mouth drainage and prevent aspiration of vomitus, which can cause asphyxiation and death.

✓ **Determining Readiness for Discharge From the PACU**

- A patient remains in the PACU until fully recovered from the anesthetic agent. Indicators of recovery include stable blood pressure, adequate respiratory function, and adequate oxygen saturation level compared with baseline.

✓ **Preparing the Postoperative Patient for Direct Discharge**

Prior to discharge, the patient will require verbal and written instructions and information about follow-up care such as (complications, wounds, activity, and medication, diet).

Care of the Hospitalized Postoperative Patient:

- Continuing to help the patient recover from the effects of anesthesia, frequently assessing the patient's physiologic status, monitoring for complications, managing pain, and implementing measures designed to achieve the long-range goals of independence with self-care
- The pulse rate, blood pressure, and respiration rate are recorded at least every 15 minutes for the first hour and every 30 minutes for the next 2 hours. Thereafter, they are measured less frequently if they remain stable. The temperature is monitored every 4 hours for the first 24 hours.

1. **Managing and relieving Pain**

   Pain is usually greatest 12 to 36 hours after surgery, decreasing after the second or third postoperative day. During the initial postoperative period, patient-controlled analgesia (PCA) or continuous analgesic administration through an IV or epidural catheter is often prescribed.

2. **Positioning**
   - Position the client as ordered. Clients who have had spinal anesthetics usually lie flat for 8 to 12 hours.
   - An unconscious or semiconscious client is placed on one side with the head slightly elevated, if possible, or in a position that allows fluids to drain from the mouth.
   - Unless contraindicated, the elevation of affected extremities (e.g., following foot surgery) with the distal extremity higher than the heart promotes venous drainage and reduces swelling.

3. **Hydration**
   - An adequate fluid balance is important to maintain renal and cardiovascular function
   - Maintain IV infusions as ordered to replace body fluids lost either before or during surgery.
   - The client who cannot take fluids by mouth may be allowed by the surgeon's orders to suck ice chips. Provide mouth care and place a mouthwash at the client's bedside

- Measure the client's fluid intake and output for at least 2 days or until fluid balance is stable without an IV infusion

4. **Diet**
   - Orders the client's postoperative diet. Depending on the extent of surgery and the organs involved.
   - The client may be allowed nothing by mouth for several days or may be able to resume oral intake when nausea is no longer present.
   - **When "diet as tolerated" is ordered:**
     - ✓ Offer clear liquids initially (**large amounts of water can induce vomiting**)
     - ✓ If the client tolerates these with no nausea, the diet can often progress to full liquids and then to a regular diet
5. **Deep-Breathing and Coughing Exercises**
   - Encourage the client to do deep-breathing and coughing exercises hourly, or at least every 2 hours, during waking hours for the first few days.
   - The client can splint the incision with a pillow when coughing, or the nurse can splint the incision for the client to reduce discomfort.
6. **Leg Exercises**, **Moving and Ambulation**
   - Encourage the client to do leg exercises taught in the preoperative period every 1 to 2 hours during waking hours preventing the stasis of blood in the veins, a cause of thrombus formation and subsequent thrombophlebitis
   - Generally, clients begin ambulation the evening of the day of surgery or the first day after surgery, unless contraindicated.
   - Early ambulation prevents respiratory, circulatory, urinary, and gastrointestinal complications.
   - Avoid placing pillows or rolls under the client's knees because pressure on the popliteal blood vessels can interfere with blood circulation to and from the lower extremities.
   - Ambulation should be gradual, starting with the client sitting on the bed and dangling the feet over the side
   - Encourage the client to turn from side to side at least every 2 hours.

7. **Wound Care, Surgical Dressings, Wound Drains and Suction**
    - Dressings are inspected regularly to ensure that they are clean, dry, and intact. Excessive drainage may indicate hemorrhage, infection, or an open wound
    - When dressings are changed, the nurse assesses the wound for appearance, size, drainage, swelling, pain, and the status of a drain or tubes
    - The surgeon inserts the wound drainage tube during surgery. Generally, the suction is discontinued from 3 to 5 days postoperatively or when the drainage is minimal.
    - Usually skin sutures are removed 7 to 10 days after surgery.

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