The Surgical Patient

Objectives:

1. Discuss the effect of surgery on the body systems.
2. Explain the etiological factors, nursing assessment, and management of potential problems during the postoperative period.
3. Review preoperative, intraoperative, and postoperative routines.
4. Develop a plan of care for the postoperative patient.

Readings:


The Surgical Patient

The Preoperative Period

A. Assessment
   1. psychosocial
   2. past health history
   3. Cardiovascular system
   4. Respiratory system
   5. CNS
   6. Renal system
   7. Hepatic system
   8. Musculoskeletal system
   9. Nutritional status
   10. Endocrine system
   11. Signs of infection
   12. Current medications, including over-the-counter meds and herbal preparations

B. Teaching
   1. Prevention of respiratory complications
      a. Turn, cough, deep breathe (TCDB)
      b. incentive spirometer (deep, sustained inspirations)
      c. techniques for effective coughing - splinting incision
      d. EARLY MOBILITY/how to get out of bed easily
2. Prevention of cardiopulmonary complications
   a. leg exercises/"pumping feet"/quadriceps sitting
   b. antiembolotic stockings
   c. sequential compression devices
   d. EARLY MOBILITY
3. Prevention of gastrointestinal complications
   a. NPO until peristalsis returns
   b. potential for NG tube to decompress bowel if necessary
   c. EARLY MOBILITY
4. Pain Control
   a. discuss methods - IM, IV, Patient Controlled Analgesia (PCA), epidural
   b. instruct use of Pain Scale
   c. discuss importance of communicating ineffective pain management; that good pain control is necessary so that patient can rest, ambulate, and deep breathe to prevent serious complications
5. Review Post-op routines
   a. NPO or limited diet
   b. tubes
   c. dressing
   d. recovery room
   e. EARLY MOBILITY

C. Preparation for Surgery
   1. Follow hospital guidelines
      a. Chart complete
         -labs
         -xrays
         -EKG
         -completed History & Physical by physician
         -large bore I.V.
         -NPO usually at least 4-6 hours prior to surgery
         -premeds as ordered
         -void prior to surgery
         -remove/tape jewelry
         -remove dentures
         -remove make-up

D. Immediate Postoperative period
   1. Post Anesthesia Recovery Unit (PACU) until recovers from anesthesia and vital signs stable
   2. On Unit:
      a. receive report from PACU nurse
      b. immediately assess patient, including:
         -Airway, breathing, circulation--vital signs and oxygen saturation
         -lungs
         -dressing
-tubes/IV sites  
-urine output (if foley catheter)  
-pain level  
-check abdomen  
-check pedal pulses  
-check level of consciousness  
c. place articles, call light within reach of patient  
d. Instruct not to get up until accompanied by nurse  
e. review instructions for TCDB, incentive spirometer, "paddling feet"  
f. Check vital signs frequently per hospital policy or at discretion of RN  
g. Monitor response to pain medications  

E. **First 24 hour Postoperative Period**  
   1. Follow activity orders from physician/if able patient should dangle evening of surgery and ambulate on Postop Day 1  
   2. Monitor vital signs q4hr/listen to lungs q 4hours  
   3. If no foley catheter, monitor to make sure that patient urinates within 6-8 hours postoperatively or may need to be straight cathed. (Use bladder scanner to assess fullness of bladder.)  
   4. Assist to turn, change positions in bed, use incentive spirometer q 1-2 hours for first 24 hours  
   5. Assess pain level and effectiveness of pain medication q 2-4 hours (depending on medication and route of administration). Anticipate patient’s pain - Do not wait until painful - medicate to keep patient comfortable.  

F. **Potential complications:**  

**Atelectasis/pneumonia**  
-alveolar collapse  
-mucus blocks bronchioles  
-cause: hypoventilation, constant recumbent position, ineffective coughing  

**Fluid & Electrolyte Imbalances**  
-result from body's normal response to stress of surgery  
-excessive body fluid loss or replacement during surgery  
-Stress response: fluid retention results from the secretion and release of two hormones by the pituitary - adrenocorticotropic hormone (ACTH) and antidiuretic hormone (ADH) - for the first 2-5 days postoperatively, there is increased secretion of ACTH and ADH cause fluid retention  
-Hypokalemia may occur from GI & urinary losses if not replaced  
-minimal acceptable urine output = 30cc/hr  

**Deep Vein Thrombosis**  
-clotting tendencies increase in the postoperative period as a result of increased platelet productions associated with increased glucocorticoid release in response to the
stress of surgery
- blood may pool in legs - venous stasis
- clot may form, potential for pulmonary embolism

**Hypotension**
- related to anesthesia, narcotics, fluid deficit, severe pain
- get out of bed slowly
- up with assistance the first time

**Neurologic Problems/Pain**
- from the surgery, from anxiety, from muscle spasms
- Pain is what the patient states it is, at the time he says it is. (Margo McCaffery)

**Fever**
- Temperature variation postoperatively
  - hypothermia 1st few hours
  - 1st 48 hours mild elevation of 39 degrees (100.4) related to the stress of surgery
  - temperatures above 100.4 in this time period are usually related to respiratory congestion/atelectasis
    - after the first 48 hours a moderate to marked elevation (above 100.4) usually indicates some infectious process

**Integumentary**
- Surgical incision - monitor for bleeding
  - monitor for healing/separation of wound edges
  - monitor for signs of infection
    * evidence of infection usually not apparent before 3rd to 5th post op day
      - redness
      - swelling
      - increased pain/tenderness at site
      - fever
      - leukocytosis
  - monitor any wound drainage
    * Jackson-Pratt (JP)
    * Hemovac
    * Penrose drain
      - drainage should be expected to change from sanguineous (red) to serosanguineous (pink) to serous (straw-colored)
      - dressing changes - check policy of hospital - usually dressing changed by physician
        - first post op day - dressing should be changed if wet because the moisture can wick bacteria into the surgical site; the moisture can macerate the skin and impede healing
**Gastrointestinal Problems**
- decreased peristalsis/bowel sounds
- nausea/vomiting related to anesthetics, narcotics from slowed peristalsis from handing of bowel during surgery; resumption of food and fluids too soon post op
  - abdominal distension
  - paralytic ileus
  - Hiccoughs - intermittent spasms of diaphragm caused by phrenic nerve irritation

**Urinary**
- inability to void post op - should void 6-8 hours post op or will need to be catheterized
  - minimum urinary output (if has foley catheter) 30ml/hr
  - low urine output expected in the first 24 hours post op