# Maternal/Newborn Nursing 3

## 3-1 Postpartum Hemorrhage

**MATERNITY, POSTPARTUM**

### STANDARD FORMS

These templates are included in the Appendix; copy before each use.



### LEARNING OUTCOMES

#### Cognitive

The student will be able to:

1. Identify factors in a patient's past obsterical history that increase risk for postpartum hemorrhage (PPH).
2. Identify factors in a patient's recent labor and delivery history that increase risk for PPH.
3. Correctly interpret the signs and symptoms of PPH.
4. Correlate signs and symptoms to the pathophysiology of PPH.
5. Identify the appropriate nursing interventions for the patient with PPH.
6. Differentiate the roles of team members in response to an obstetrical emergency.

#### Psychomotor

The student will be able to:

1. Perform appropriate assessment for a patient with PPH.
2. Initiate appropriate interventions for a patient with PPH.
3. Correctly set up or administer medications as ordered.
4. Work collaboratively as part of the healthcare team in the care of a patient with PPH.

#### Affective

The student will be able to:

1. Reflect thoughtfully upon performance of self and others in a simulated obstetrical emergency situation.
2. Identify personal feelings in a simulated obstetrical emergency situation.
3. Discuss feelings related to working as a member of a team.
4. Identify factors that worked well during the scenario.
5. Identify factors that needed improvement during the scenario.
6. Develop self-confidence in the care of a patient during a simulated obstetrical emergency.

#### Communication

The student will be able to:

1. Communicate effectively with healthcare team members in a simulated obstetrical emergency.
2. Communicate effectively with the patient and family in a simulated obstetrical emergency.
3. Practice Transparent Thinking (thinking out loud) to facilitate group problem solving.
4. Use Directed Communication (directing a message to specific individual) when delegating tasks.
5. Employ Closed-Loop Communication (acknowledgment of receipt of the message and status) to acknowledge communications from others.

#### Safety

The student will be able to:

Administer and maintain specific protecting interventions with attention to safety of the client and healthcare professional.

1. Demonstrate a safe environment with attention to hazards to healthcare providers, visitors, and the client. Includes body mechanics, tripping hazards, and equipment issues.
2. Demonstrate attention to national patient safety goals. Includes patient identification standards, effective communication among healthcare providers, and safe medication administration.
3. Demonstrate attention to standard precautions. Includes hand washing, infection control measures, and use of personal protective equipment (PPE) as needed.

#### Leadership and Management/Delegation

The student will be able to:

1. Identify tasks that can be legally, ethically, and safely delegated to unlicensed assistive personnel (UAP) in a simulated obstetrical emergency situation.
2. Identify and prioritize patient's needs in care of a patient with a simulated obstetrical emergency

### Pharmacology

The student will be able to:

1. Identify medications used in the treatment of postpartum hemorrhage.
2. Safely administer medications in a simulated experience.

## OVERVIEW OF THE PROBLEM

### Definition

Postpartum hemorrhage (PPH): Loss of 500 mL of blood or more during the first 24 hr postpartum in vaginal birth; 1,000 mL in cesarean birth.

### Pathophysiology

Excessive loss of blood secondary to trauma, decreased uterine contractility; results in hypovolemia.

### Risk Factors

- Uterine atony
  - Uterine overdistention (multipregnancy, polyhyramnios, fetal macrosomia)
  - Multiparity
  - Prolonged or precipitous labor
  - Anesthesia
  - Fibroids
  - Oxytocin induction of labor
  - Magnesium sulfate
  - Overmassage of uterus in postpartum
  - Distended bladder
- Lacerations: cervix, vagina, perineum
- Retained placental fragments: usually delayed postpartum hemorrhage
- Hematoma: deep pelvic, vaginal, or episiotomy site

### Assessment

#### *Subjective*

- Occurring late with signs of shock-anxiety, apprehension

#### *Objective*

- Uterus: Boggy, flaccid; excessive vaginal bleeding.
  - Late signs of shock: Air hunger; anxiety/apprehension, tachycardia, tachypnea, hypotension.
  - Estimated blood loss during labor and birth and in early postpartum period.
- Pain: Vulvar, vaginal, perineal.
  - Perineum: Distended due to edema; discoloration due to hematoma. May complain of rectal pressure.
  - Lacerations: Bright red vaginal bleeding with firm fundus.

### Diagnostic Tests

CBC, hemoglobin, hematocrit, clotting time, platelet count.

### Treatment

#### *Medical Management*

- Order oxytocics:
  - IV oxytocin infusion
  - IV or oral ergot preparations ergotrate maleate (Ergonovine); methylergonovine (Methergine); carboprost tromethamine (Hemabate), misoprostol (Cytotec)
- Order diagnostic tests
- Type and crossmatch for blood replacement
- Surgical
  - Repair of lacerations
  - Evacuation, ligation of hematoma
  - Curettage: Retained placental fragments

#### *Nursing Management*

Goal: Minimize blood loss.

- Notify physician promptly of abnormal assessment findings.
- Send blood work stat, as directed to determine blood loss and etiology.
- Fundal massage.
- Empty urinary bladder.
- Administer uterotonic medications as ordered. For ergot products and carboplast, monitor blood pressure.
- Start and monitor supplemental oxygen.

Goal: Stabilize status.

- Establish or maintain IV line.
- Administer medications as ordered to control bleeding, combat shock.
- Prepare for surgery, if indicated.

Goal: Prevent infection.

- Strict aseptic technique.

Goal: Continual monitoring: vital signs, bleeding (pad count or weigh pads, examine clots and tissue), fundal status, oxygenation, vasoconstriction, level of consciousness, urinary output.

Goal: Prevent or detect sequelae.

- Sheehan's syndrome (rare syndrome of hypopituitarism from decreased blood flow to pituitary gland in severe postpartum hemorrhage).
- Disseminated intravascular coagulation: Diffuse or widespread coagulation characterized by excessive clotting and bleeding (50% caused by obstetrical complications).

Goal: Health teaching.

- After episode reinforce perineal care, hand washing, iron supplements of other medications as ordered, adequate fluid and nutrition, monitor energy level, signs of infection or other complications.

## Evaluation/Outcome Criteria

- Maternal vital signs are stable
- Bleeding is diminished or absent
- Normal diagnostic test results
- No complications (e.g., infection, thrombophlebitis, DIC)

## REVIEW QUESTIONS

1. Define early PPH.
   **Answer:**

2. Is there a standard definition of PPH?
   **Answer:**

3. If not, how does that affect the ability to intervene appropriately?
   **Answer:**

4. Describe three potential causes of early PPH. Fill in the chart below.
   **Answer:**

| Type | Assessment Data | Precipitating Factors | Treatment |
|---|---|---|---|
| | | | |

5. List at least two potential consequences or sequelae of PPH.
   **Answer:**

### Related Evidence-Based Practice Guidelines

American College of Obstetricians and Gynecologists (ACOG). (2006, October). Postpartum hemorrhage. (ACOG Practice Bulletin No. 76). Washington, DC: Author.

*Compendium of postpartum care* (2nd ed) (2006). Association of Women's Health, Obstetric, and Neonatal Nurses

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SBAR technique for communication: A situational briefing model. The Institute for Health Care. Retrieved December 19, 2008, from http://www.ihi.org/IHI/Topics/PatientSafety/SafetyGeneral/Tools/SBARTechniqueforCommunicationASituationalBriefingModel.htm

### Topics to Review Prior to the Simulation

- Postpartum assessment and nursing care
- Obstetrical risk factors for developing postpartum hemorrhage
- Nursing interventions for a patient with postpartum hemorrhage
- Pharmacological (oxytocic agents) and other medical interventions for a patient with PPH

## SIMULATION

### Client Background

Melissa Hanson is a 31-year-old G5T3P1A0L4 who delivered a 9 lb 10 oz female via forceps at 8 AM for a prolonged second stage over a mediolateral episiotomy after a 20 hr labor augmented with Pitocin. She had epidural anesthesia. Her estimated blood loss (EBL) was 500 cc. Baseline vitals signs included BP ranging from 120/80 to 128/92, P 70, RR 12.

#### *Biographical Data*

- Age: 31
- Gender: female
- Height: 5 ft 6 in
- Weight: 120 lb

#### *Cultural Considerations*

- Language: English
- Ethnicity: Norwegian/German
- Nationality: American
- Culture: no significant cultural considerations identified

#### *Demographic*

- Marital status: married
- Educational level: high school graduate, technical school
- Religion: Lutheran
- Occupation: medical technician

#### *Current Health Status*

- Post forceps delivery

#### *History*

- Psychosocial history
  - Social support: husband, five children
- Past health history
  - Medical: not significant
  - Surgical: tonsillectomy
- Family History: not significant

### Admission Sheet

| | |
|---|---|
| Name: | Melissa Hanson |
| Age: | 31 |
| Gender: | Female |
| Marital Status: | Married |
| Educational Level: | High school graduate, technical school |
| Religion: | Lutheran |
| Ethnicity: | Norwegian/German |
| Nationality: | United States citizen |
| Language: | English |
| Occupation: | Medical technician |

Hospital
Provider's Orders

Patient's Name: Melissa Hanson
Allergies: Aspirin

Diagnosis: Vaginal delivery, forceps

| Date | Time | Order | Signature |
|---|---|---|---|
| | | Admit to mother/baby unit | |
| | | Vital signs: q ½ hr, then q 4 hr × 24, then q 8 hr | |
| | | Diet: Regular | |
| | | Activity: ad lib as tolerated, may shower when stable and ambulatory | |
| | | IV therapy: | |
| | | Lactated Ringer's solution (LR) at 125 mL/hr, DC when vital signs are stable, vaginal bleeding normal, and tolerating po fluids well | |
| | | Add oxytocin 10 units to IV immediately after delivery of placenta | |
| | | Medications: | |
| | | Dermoplast spray to hemorrhoids, episiotomy prn if requested, as often as 6 × per hr | |
| | | Tucks pads at bedside prn for hemorrhoids, may be applied to rectum as often as 6 × per hr | |
| | | Bisacodyl (Dulcolax) suppository 10 mg or Fleet Enema daily prn for constipation, if requested | |
| | | Colace tab 1 po at bedtime prn for constipation, if requested | |
| | | Magnesium hydroxide/aluminum hydroxide/simethicone (Maalox) 30 mL po, if requested, as often as 1 × per hr for indigestion | |
| | | Prenatal vitamin 1 po daily as dietary supplement | |
| | | Ibuprofen (Motrin) 800 mg po q 8 hr prn for cramping pain | |
| | | Acetaminophen (Tylenol) 325 mg 1–2 tab po q 3 hr prn for mild to moderate pain | |
| | | Oxycodone/acetaminophen (Percocet) 5/325 mg 1–2 tab po q 4 hr for severe pain | |
| | | Zolpidem (Ambien) 5 mg po at bedtime prn for sleep, if requested | |
| | | RhoGam if RH negative and eligible | |
| | | Rubella immunization per protocol if eligible | |
| | | Diagnostic studies: | |
| | | CBC 24 hr postpartum | |
| | | Treatments: | |
| | | Ice to perineum × 12 hr postpartum | |
| | | Sitz bath q 4 hr after 12 hr for perineal discomfort | Dr. Ellis |

### Nursing Report

Report on admission to mother/baby unit: Ms. Hanson is being admitted to mother/baby 2 hr after delivery. She has an IV of 1,000 mL LR with 20 units of Pitocin at 125 mL/hr to be discontinued when finished if stable and tolerating po fluids. Her vital signs 30 min ago were T 99, BP 130/90, P 80, slightly weaker, RR 14, and deep, skin cool and pale, urinary output—has not voided since delivery. She is alert, oriented, and mildly anxious. Her husband is in the nursery. Pericare completed and peripads changed at 9 AM.

### Student Simulation Prep Assignments

*1. Identify items and their purpose in the care of a patient with PPH.*

| Item | Purpose |
|---|---|
| Airway and suction equipment | |
| Blood pressure cuff | |
| Blood products | |
| Chux pads/peripads | |
| Foley catheter | |
| Gloves | |
| IV equipment and solutions | |
| Medications | |
| Oxygen equipment | |
| Pulse oximeter | |
| Specimen tubes | |
| Stethoscope | |

*2. Identify team members and their specific roles in the care of a patient with PPH.*

| Team member | Role |
|---|---|
| Physician | |
| Anesthesiologist or nurse anesthetist | |
| Primary nurse | |
| Respiratory therapist | |
| UAP | |

*3. Relevant Data Exercise:* Fill in the columns below.

| Relevant Data from Background and Report | Relevant Data from Other Sources | Data Missing | Sources for Missing Data | Data Requiring Follow-up |
|---|---|---|---|---|
| | | | | |

| Relevant Data from Background and Report | Relevant Data from Other Sources | Data Missing | Sources for Missing Data | Data Requiring Follow-up |
|---|---|---|---|---|
| | | | | |

### *4. Initial Focused Assessment*

After reviewing the client background and nursing report, you are ready to assess your client's current status. Under each category, identify how you would target your assessment and what you would expect to find for the patient with PPH.

History

Are there any questions you need to ask the patient or family to obtain additional relevant data?

Physical Exam

- General appearance:
- Integumentary:
- HEENT:
- Respiratory:
- CV:
- Breasts:
- Abdominal:
- Neuro:
- Musculoskeletal:
- Reproductive:
- Additional:
- Developmental

What are the nursing implications considering the developmental stage of your patient?

**Answer:**

### *5. Diagnostic Tests*

What diagnostic test results relevant to the patient's current problem are needed to plan care?

Complete the table using Van Leeuwen et al, *Davis's Comprehensive Handbook of Laboratory and Diagnostic Testing with Nursing Implications* 4e, or other diagnostic test reference.

| Diagnostic Test | Significance to This Patient's Problem |
|---|---|
| Hgb | |
| Hct | |

### *6. Treatment*

Identify drugs that are used to treat a patient with PPH.

Complete the table using Deglin et al, *Davis's Drug Guide for Nurses* 12e, or other drug reference.

| Medication | Dose, Route, Frequency | Indications (reason ordered for this client) | Side Effects | Nursing Implications |
|---|---|---|---|---|
| Pitocin (oxytocin) | IM: 10–20 units (1–2 mL) after delivery of the placenta | | | |

*Continued*

| Medication | Dose, Route, Frequency | Indications (reason ordered for this client) | Side Effects | Nursing Implications |
|---|---|---|---|---|
| | Intravenous infusion (drip method): If the patient has an intravenous infusion of LR or NSS running, 10–40 units of oxytocin may be added to the bag, depending on the amount of solution remaining (maximum 40 units to 1,000 mL). Adjust the infusion rate to sustain uterine contraction and control uterine atony (125–200 mU/min) | | | |
| Methergine (methylergonovine) | po 200–400 mcg (0.4–0.6 mg) q 6–12 hr for 2–7 days<br>IM, IV (rarely given IV, emergencies only, 200 mcg (0.2 mg) q 2–4 hr for up to 5 doses | | | |

| Medication | Dose, Route, Frequency | Indications (reason ordered for this client) | Side Effects | Nursing Implications |
|---|---|---|---|---|
| Cytotec (misoprostol) | 0.8 mg rectally × 1 | | | |
| Hemabate (carboprost tromethamine) | IM or intramyometrially 250 mcg (0.25 mg) of Hemabate sterile solution (1 mL).<br>Can be repeated at intervals of 15–90 min per physician order<br>The total dose should not exceed 2 mg (8 doses) | | | |

*7. Nursing Problems/Diagnoses*

Identify three priority nursing problems/diagnoses for a patient with PPH.

| Assessment Data | Priority Problem | Intervention | Expected Patient Outcome | Which Interventions Could be Delegated to Unlicensed Personnel? |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |

| Assessment Data | Priority Problem | Intervention | Expected Patient Outcome | Which Interventions Could be Delegated to Unlicensed Personnel? |
|---|---|---|---|---|
| | | | | |

## References


American College of Obstetricians and Gynecologists (ACOG). (2006, October). *Postpartum hemorrhage.* (ACOG Practice Bulletin No. 76). Washington, DC: ACOG.

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