

Complications of postpartum period & its Nursing management

Complications during postpartum period include

1. Nursing Management Post-partum Hemorrhage(PPH)
2. Nursing Management of infection

1- Postpartum hemorrhage (pph)

Postpartum hemorrhage is defined as a blood loss greater than 500 mL after vaginal birth or more than 1,000 mL after a cesarean birth

Types of Postpartum hemorrhage

1. **Early postpartum hemorrhage:** blood loss that occurs within 24 hours of birth
2. **Late postpartum hemorrhage:** blood loss that occurs after 24 hours to 6 weeks after birth.

Causes of postpartum hemorrhage is by using the “5 T’s”:

1. **Tone:** uterine atony, distended bladder
2. **Tissue:** retained placenta and clots
3. **Trauma:** vaginal, cervical, or uterine injury
4. **Thrombin:** coagulopathy (preexisting or acquired)
5. **Traction:** causing uterine inversion



Tone

Altered uterine muscle tone most commonly results from **overdistention**

of the uterus. Overdistention can be caused by **multifetal gestation, fetal macrosomia, hydramnios, fetal abnormality, or placental fragments, prolonged or rapid, forceful labor**, especially if stimulated by **oxytocin; bacterial toxins** (e.g., chorioamnionitis, endomyometritis, septicemia);

use of anesthesia, especially halothane; and magnesium sulfate used in the treatment of preeclampsia. the most common cause of early postpartum hemorrhage, which can lead to hypovolemic shock. A distended bladder can also displace the uterus from the midline to either side, which impedes its ability to contract to reduce bleeding

Tissue

Failure of complete placental separation and expulsion leads to retained fragments, which occupy space and prevent the uterus from contracting fully to clamp down on blood vessels; this can lead to hemorrhage. uterine inversion, this condition is associated with grand multiparity, abnormal adherence of the placenta, excessive traction on the umbilical cord, vigorous fundal pressure, precipitous labor, or vigorous manual removal of the placenta.

Subinvolution refers to incomplete involution of the uterus or failure to return to its normal size and condition after birth.

Complications of subinvolution include hemorrhage, pelvic peritonitis, salpingitis, and abscess formation, retained placental fragments, distended bladder, uterine myoma, and infection.

The clinical picture of subinvolution includes a postpartum fundal height that is higher than expected, with a boggy uterus; the lochia fails to change colors from red to serosa to alba within a few weeks.

This condition is usually identified at the woman's postpartum examination 4 to 6 weeks after birth.

Trauma

Damage to the genital tract may occur spontaneously or through the manipulations used during birth.

- Lacerations and hematomas

- After prolonged or vigorous labor, if the uterus has been stimulated with oxytocin or prostaglandins.

- After extrauterine or intrauterine manipulation of the fetus.

- Cervical lacerations commonly occur during a forceps delivery or in mothers who have not been able to resist bearing down before the cervix is fully dilated.

- Vaginal sidewall lacerations when the hand birth with the head.

- During manipulations to resolve shoulder dystocia.

Thrombin

- Thrombosis (blood clots) helps to prevent postpartum hemorrhage immediately after birth by providing hemostasis. Fibrin deposits and clots in supplying vessels play a significant role in the hours and days after birth.
- Coagulopathies should be suspected when postpartum bleeding persists without any identifiable cause.
- The client's coagulation status is determined during pregnancy. □ Conditions associated with coagulopathies in the postpartum client

include:

1. **Idiopathic thrombocytopenic purpura:** is a disorder of increased platelet destruction caused by autoantibodies, which can increase a woman's risk of hemorrhaging. Glucocorticoids and immune globulin are the mainstays of medical therapy.

2. **Von Willebrand disease:** is a congenital bleeding disorder that is

inherited as an autosomal dominant trait. It is characterized by a prolonged bleeding time, a deficiency of von Willebrand factor, and impairment of platelet adhesion, it is diagnosed more frequently in women because of menorrhagia. During pregnancy, the von Willebrand factor level increases in most women; thus, labor and birth usually proceed normally, but we should be attention for the first week postpartum.

3. **Disseminated intravascular coagulation:** is a life threatening, acquired coagulopathy in which the clotting system is abnormally activated, resulting in widespread clot formation in the small vessels throughout the body, which leads to the depletion of platelets and coagulation factors. This is why DIC is also known as consumption coagulopathy.

Traction

Uterine inversion, in which the uterus is turned inside out, results from excessive traction on the umbilical cord in an attempt to hasten the third stage of childbirth. Inversion prevents the myometrium from contracting and retracting, and it is associated with life-threatening hemorrhaging as well as profound hypotension from vagal activation. Maternal symptoms include pain, profuse bleeding, and shock

Causes: occurs with an atonic uterus that has not separated well from the placenta, excessive traction on the umbilical cord while placental delivery is being assisted

Management of uterine inversion involves gentle pushing of the uterus back into position (under general anesthesia) by the health care provider, followed by oxytocin to augment uterine contractions and antibiotic therapy to prevent infection. Prevention can be achieved by not pulling forcefully on the umbilical cord until the placenta separates.

Factors Placing a Woman at Risk for Postpartum Hemorrhage

Clinical Risk Factors	Associated Clinical Conditions
Tone (abnormalities of uterine contractions)	
Overdistension of uterus	Hydramnios Multifetal gestation Macrosomia
Uterine muscle exhaustion	Rapid labor Prolonged labor Oxytocin use
Uterine infection	Maternal fever Prolonged rupture of membranes
Tissue (retained in uterus)	
Products of conception	Incomplete placenta at birth
Retained blood clots	Atonic uterus
Trauma (of the genital tract)	
Lacerations anywhere	Precipitate birth or operative birth
Laceration extensions	Malposition of fetus Previous uterine surgery
Thrombin (coagulation abnormalities)	
Preexisting conditions	Hereditary inheritance Hemophilia von Willebrand's disease History of previous PFH Acquired in pregnancy Idiopathic thrombocytopenia purpura Bruising, elevated BP Disseminated intravascular coagulation
Traction (of the cord, which may cause uterine inversion)	
Forceful pulling when placenta is not separated	Impatience No countertraction applied on the uterine fundus Previous history of inversion Traction on the cord when uterus is not contracted

Nursing management

1. Massage the Uterus

Massage the uterus if uterine atony is noted. The uterine muscles are sensitive to touch; massage stimulates the muscle fibers to contract. Massage the boggy uterus to stimulate contractions and expression of any accumulated blood clots while supporting the lower uterine segment. As blood pools in the vagina, stasis of blood causes clots to form. These clots need to be expelled as pressure is placed on the fundus.

2- Administer a Uterotonic Drug

The injection of a uterotonic drug immediately after birth is an important intervention used to prevent postpartum hemorrhage. If repeated fundal massage and expression of clots fail.

- Oxytocin (Pitocin); a synthetic analog of prostaglandin E1.
- misoprostol (Cytotec) or dinoprostone (Prostin E2);
- methylergonovine maleate (Methergine); and
- a derivative of prostaglandin (PGF₂α), carboprost (Hemabate)

Contraindications of administering each of the medications

- Pitocin—never give undiluted as a bolus injection IV
- Cytotec—allergy, active CVD, pulmonary or hepatic disease
- Prostin E2—active cardiac, pulmonary, renal, or hepatic disease
- Methergine—if the woman is hypertensive, do not administer
- Hemabate—contraindicated with asthma due to risk of bronchial spasm

3- Maintain the Primary IV Infusion

1. if blood transfusions are necessary prepared to start a second
infusion

2. blood for type and cross-match 3.

Administer oxytocics as ordered

4. correlating and titrating the infusion rate to assessment findings of uterine firmness and lochia.

4- Check Vital Signs

Check vital signs every 15 to 30 minutes, Assess the woman's level of consciousness to determine changes that may result from inadequate cerebral perfusion

5- Prepare the Woman for Removal of Retained Placental Fragments Nurses should anticipate and prepare the woman for transfer to the operating room for surgical intervention if tamponade techniques fail to achieve hemostasis. The blood bank should be notified that additional transfusions may be required and the woman's condition closely monitored for signs of hypovolemic shock.

6- Continually Assess the Woman for Signs and Symptoms of Hemorrhagic Shock

Monitor the woman's blood pressure, pulse, capillary refill, mental status, and urinary

output. These assessments allow estimation of the severity of blood loss and help direct treatment.

7- Institute Emergency Measures if DIC Develops

- Be ready to replace fluid volume, administer blood component therapy, and optimize the mother's oxygenation and perfusion status to ensure adequate cardiac output.
- Continually reassess the woman's coagulation status via laboratory studies.
- Monitor vital signs closely, being alert for changes that signal an increase in bleeding or impending shock. Observe for early signs of ecchymosis, including spontaneous bleeding from gums or nose, petechiae, excessive bleeding from the cesarean incision site or IV site, hematuria, and blood in the stool. Skin color, and reduction of urinary output.

2- Postpartum Infection

Postpartum infection is defined as a fever of (38° C) or higher after the first 24 hours after childbirth, occurring on at least 2 of the first 10 days after birth, exclusive of the first 24 hours

Risk factors include:

Surgical birth, prolonged rupture of membranes, long labor with multiple vaginal examinations, extremes of client age, low socioeconomic status, and anemia during pregnancy.

Infections can easily enter the female genital tract externally and ascend through the internal genital structures.

In addition, the normal physiologic changes of childbirth increase the risk of infection by decreasing the vaginal acidity due to the presence of amniotic fluid, blood, and lochia, all of which are alkaline. An alkaline environment encourages the growth of bacteria. the normal vaginal flora. *Staphylococcus aureus*, *Escherichia coli*, *Klebsiella*, *Gardnerella*

vaginalis, gonococci, coliform bacteria, group A or B hemolytic streptococci,

Chlamydia trachomatis, and the anaerobes that are common to bacterial vaginosis

2.1 Metritis

Endometritis, postpartum uterine infections typically involve more than

Just the endometrial lining. **Metritis** is an infectious condition that involves the endometrium, decidua, and adjacent myometrium of the uterus. The bacteria responsible for pelvic infections are those that normally reside in the bowel, vagina, perineum, and cervix, such as *E. coli*, *Klebsiella pneumoniae*, or *G. vaginalis*.

Treatment is broad-spectrum antibiotics are used to treat the infection. Provide analgesia, and provide emotional support. Fever drops and symptoms cease within 48 to 72 hours after the start of antibiotic therapy.

- Nurses must assess new mothers for risk factors and identify early, subtle signs and symptoms of an infectious process. Then complete the assessment (using the “**BUBBLE-EE**” parameters) to assess the breasts, uterus, bladder, bowel, lochia, episiotomy, extremities, and emotional status, and being alert for signs and symptoms of infection.

The acronym **REEDA** is frequently used for assessing a woman’s perineum status. It is derived from five components that have been identified to be associated with the healing process of the perineum. These include:

1. Redness
2. Edema
3. Ecchymosis
4. Discharge
5. Approximation of skin edges

2.2 Wound infection

Any break in the skin or mucous membranes provides a portal for bacteria. In the postpartum woman, sites of wound infection include **cesarean surgical incisions, the episiotomy site in the perineum, and genital tract lacerations.**

2.3 Urinary Tract Infections

Urinary tract infections are most commonly caused by bacteria often found in bowel flora, including *E. coli*, *Klebsiella*, *Proteus*, and *Enterobacter* species. Invasive manipulation of the urethra (e.g., urinary catheterization), frequent vaginal examinations, and genital trauma increase the likelihood of a urinary tract infection.

2.4 Mastitis

A common problem that may occur within the **first 2 weeks** postpartum is an inflammation of the breast. It can result from any event that creates **milk stasis**: insufficient drainage of the breast, rapid weaning, oversupply of milk, pressure on the breast from a poorly fitting bra, a blocked duct, missed feedings, and breakdown of the nipple via fissures, cracks, or blisters.

The first symptoms experienced by the mother. Breasts are red, tender, and hot to touch and Flu-like symptoms.

Treatments are: Effective milk removal, pain medication, and antibiotic therapy.

Guidelines to reduce the incidence of postpartum infections

- Maintain aseptic technique when performing invasive procedures such as urinary catheterization, when changing dressings, and during all surgical procedures.
- Use good hand washing technique before and after each client care activity.
- Reinforce measures for maintaining good perineal hygiene.
- Use adequate lighting and turn the client to the side to assess the episiotomy site.

- Screen all visitors for any signs of active infections to reduce the client's risk of exposure.

- Review the client's history for preexisting infections or chronic conditions.

Monitor vital signs and laboratory results for any abnormal values.

- Monitor the frequency of vaginal examinations and length of labor.

- Assess frequently for early signs of infection, especially fever and the appearance of lochia.

- Inspect wounds frequently for inflammation and drainage.

- Encourage rest, adequate hydration, and healthy eating habits.

- Reinforce preventive measures during any interaction with the client