



chapter 22

## Nursing Management of the Postpartum Woman at Risk

### Key TERMS

mastitis  
metritis  
postpartum depression  
postpartum hemorrhage  
subinvolution  
thrombophlebitis  
uterine atony  
uterine inversion

### Learning OBJECTIVES

*After studying the chapter content, the student should be able to accomplish the following:*

1. Define the key terms.
2. Discuss the risk factors, clinical manifestations, preventive measures, and management of common postpartum complications.
3. Describe at least two affective disorders that can occur in women after birth and specific therapeutic management to address them.
4. Differentiate the causes of postpartum hemorrhage and list appropriate assessments and interventions.
5. Outline the role of the nurse in assessing and managing care of women with selected postpartum complications.



## WOW

After holding their breath during the childbirth experience, nurses shouldn't let it out fully and relax until discharge.

Typically, recovery from childbirth proceeds normally in both physiologic and psychological aspects. It is a time filled with many changes and wide-ranging emotions, and the new mother commonly experiences a great sense of accomplishment. However, the woman can experience deviations from the norm, developing a postpartum condition that places her at risk. The development of a high-risk condition or complication can become a life-threatening event, and Healthy People 2010 addresses these risks in two National Health Goals (Healthy People 2010).

This chapter will address the nursing management of the most common conditions that place the postpartum woman at risk: hemorrhage, infection, thromboembolic disease, and postpartum affective disorders.

## Postpartum Hemorrhage

**Postpartum hemorrhage** is a potentially life-threatening complication of both vaginal and cesarean births. It is the leading cause of maternal mortality in the United States (Smith & Brennan, 2004). Roughly one third of maternal deaths are related to postpartum hemorrhage, and it occurs in 4% of deliveries (Scott et al., 2003).

### HEALTHY PEOPLE 2010

#### National Health Goals Related to the Postpartum Woman at Risk

Objective	Significance
Reduce maternal deaths from a baseline of 7.1 maternal deaths per 100,000 live births to 3.3 maternal deaths per 100,000 live births.	Will help foster the need for early identification of problems and prompt intervention to reduce the potential negative outcomes of pregnancy and birth
Reduce maternal illness and complications due to pregnancy Related to postpartum complications, including postpartum depression	Will help to contribute to lower rates of rehospitalization, morbidity, and mortality by focusing on thorough assessments in the postpartum period Will help to minimize the devastating effects of complications during the postpartum period and the woman's ability to care for her newborn

DHHS, 2000.

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. Blood loss that occurs within 24 hours of birth is termed early postpartum hemorrhage; blood loss that occurs 24 hours to 6 weeks after birth is termed late postpartum hemorrhage. However, this definition is arbitrary, because estimates of blood loss at birth are subjective and generally inaccurate. Studies have suggested that health care providers consistently underestimate actual blood loss (Wainscott, 2004). A more objective definition of postpartum hemorrhage would be any amount of bleeding that places the mother in hemodynamic jeopardy.

Factors that place a woman at risk for postpartum hemorrhage are listed in Box 22-1.

## Etiology

Excessive bleeding can occur at any time between the separation of the placenta and its expulsion or removal. The most common cause of postpartum hemorrhage is **uterine atony**, failure of the uterus to contract and retract after birth. The uterus must remain contracted after birth to control bleeding from the placental site. Any factor that causes the uterus to relax after birth will cause bleeding—even a full bladder that displaces the uterus.

Over the course of a pregnancy, maternal blood volume increases by approximately 50% (from 4 to 6 L). The plasma volume increases somewhat more than the total red blood cell volume, leading to a fall in the hemoglobin and hematocrit. The increase in blood volume meets the perfusion demands of the low-resistance uteroplacental unit and provides a reserve for the blood loss that occurs at delivery (Cunningham, 2005). Given this increase, the typical signs of hemorrhage (e.g., falling blood pressure, increasing pulse rate, and decreasing urinary output) do not appear until as much as 1,800 to 2,100 mL has been lost (Gilbert & Harmon, 2003). In addition, accurate determination of actual blood loss is difficult because of pooling inside the uterus, on peripads, mattresses, and the floor. Because no universal clinical standard exists, nurses must be vigilant of risk factors, checking clients carefully before letting the birth attendant leave.

Other causes of postpartum hemorrhage include lacerations of the genital tract, episiotomy, retained placental fragments, uterine inversion, coagulation disorders, and hematomas of the vulva, vagina, or subperitoneal areas (London et al., 2003). A helpful way to remember the causes of postpartum hemorrhage is the "4 Ts": *tone*, *tissue*, *trauma*, and *thrombosis* (Society of Obstetricians and Gynecologists of Canada, 2002).

## BOX 22-1

**FACTORS PLACING A WOMAN AT RISK FOR POSTPARTUM HEMORRHAGE**

- Prolonged first, second, or third stage of labor
- Previous history of postpartum hemorrhage
- Multiple gestation
- Uterine infection
- Manual extraction of placenta
- Arrest of descent
- Maternal exhaustion, malnutrition, or anemia
- Mediolateral episiotomy
- Preeclampsia
- Precipitous birth
- Maternal hypotension
- Previous placenta previa
- Coagulation abnormalities
- Birth canal lacerations
- Operative birth (forceps or vacuum)
- Augmented labor with medication
- Coagulation abnormalities
- Grand multiparity
- Hydramnios (Higgins, 2004)

**Tone**

Altered uterine muscle tone most commonly results from overdilatation of the uterus. Overdilatation can be caused by multifetal gestation, fetal macrosomia, hydramnios, fetal abnormality, or placental fragments. Other causes might include prolonged or rapid, forceful labor, especially if stimulated; bacterial toxins (e.g., chorioamnionitis, endomyometritis, septicemia); use of anesthesia, especially halothane; and magnesium sulfate used in the treatment of preeclampsia (Youngkin & Davis, 2004). Overdilatation of the uterus is a major risk factor for uterine atony, the most common cause of early postpartum hemorrhage, which can lead to hypovolemic shock.

**Tissue**

Uterine contraction and retraction lead to detachment and expulsion of the placenta after birth. Complete detachment and expulsion of the placenta permit continued contraction and optimal occlusion of blood vessels. Failure of complete separation of the placenta and expulsion does not allow the uterus to contract fully, since retained fragments occupy space and prevent the uterus from contracting fully to clamp down on blood vessels; this can lead to hemorrhage. After the placenta is expelled, a thorough inspection is necessary to confirm its intactness; tears or fragments left inside may indicate an accessory lobe or placenta accreta. Placenta accreta is an uncommon condition in which the chorionic villi adhere to the myometrium. This causes the placenta to adhere abnormally to the uterus and not separate and spontaneously deliver. Profuse hemorrhage results because the uterus cannot contract fully.

A prolapse of the uterine fundus to or through the cervix so that the uterus is turned inside out after birth is called **uterine inversion**. This condition is associated with abnormal adherence of the placenta, excessive traction on the umbilical cord, vigorous fundal pressure, precipitous labor, or vigorous manual removal of the placenta. Acute postpartum uterine inversion is rare, with an estimated incidence of 1 in 2,000 births (Pope & O'Grady, 2003). Prompt recognition and rapid treatment to replace the inverted uterus will avoid morbidity and mortality for this serious complication (McKinney et al., 2005).

**Subinvolution** refers to the incomplete involution of the uterus or failure to return to its normal size and condition after birth (O'Toole, 2005). Complications of subinvolution include hemorrhage, pelvic peritonitis, salpingitis, and abscess formation (Youngkin & Davis, 2004). Causes of subinvolution include retained placental fragments, distended bladder, uterine myoma, and infection. The clinical picture 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 with a bimanual vaginal examination or ultrasound. Treatment is directed toward stimulating the uterus to expel fragments with a uterine stimulant, and antibiotics are given to prevent infection.

**Trauma**

Damage to the genital tract may occur spontaneously or through the manipulations used during birth. For example, a cesarean birth results in more blood loss than a vaginal birth. The amount of blood loss depends on suturing, vasospasm, and clotting for hemostasis. Uterine rupture is more common in women with previous cesarean scars or those who had undergone any procedure resulting in disruption of the uterine wall, including myomectomy, uteroplasty for a congenital anomaly, perforation of the uterus during a dilation and curettage (D&C), biopsy, or intrauterine device (IUD) insertion (Smith & Brennan, 2004).

Trauma can also occur after prolonged or vigorous labor, especially if the uterus has been stimulated with oxytocin or prostaglandins. Trauma can also occur 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 are associated with operative vaginal births but may occur spontaneously, especially if the fetal hand presents with the head. Lacerations can arise during manipulations to resolve shoulder dystocia. Lacerations should always be suspected in the face of a contracted uterus with bright-red blood continuing to trickle out of the vagina.

## Thrombosis

Thrombosis (blood clots) helps to prevent postpartum hemorrhage immediately after birth by providing a homeostasis in the woman's circulatory system. As long as there is a normal clotting mechanism that is activated, postpartum bleeding will not be exacerbated. Disorders of the coagulation system do not always appear in the immediate postpartum period due to the efficiency of stimulating uterine contractions through medications to prevent hemorrhage. 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 (Benedetti, 2002).

Ideally, the client's coagulation status is determined during pregnancy. However, if she received no prenatal care, coagulation studies should be ordered immediately to determine her status. Abnormal results typically include decreased platelet and fibrinogen levels, increased prothrombin time, partial thromboplastin time, and fibrin degradation products, and a prolonged bleeding time (Lowdermilk & Perry, 2004). Conditions associated with coagulopathies in the postpartum client include idiopathic thrombocytopenic purpura (ITP), von Willebrand disease (vWD), and disseminated intravascular coagulation (DIC).

### Idiopathic Thrombocytopenia Purpura

ITP is a disorder of increased platelet destruction caused by the development of autoantibodies to platelet-membrane antigens. The incidence of ITP in adults is approximately 66 cases per 1 million per year (Silverman, 2005). Thrombocytopenia, capillary fragility, and increased bleeding time define the disorder. Clinical manifestations include easy bruising, bleeding from mucous membranes, menorrhagia, epistaxis, bleeding gums, hematomas, and severe hemorrhage after a cesarean birth or lacerations (Blackwell & Goolsby, 2003). Glucocorticoids and immune globulin are the mainstays of medical therapy.

### von Willebrand Disease

von Willebrand disease (vWD) is a congenital bleeding disorder, inherited as an autosomal dominant trait, that is characterized by a prolonged bleeding time, a deficiency of von Willebrand factor, and impairment of platelet adhesion (O'Toole, 2005). In the United States, it is estimated to affect fewer than 3% of the population (Geil, 2004). Most cases remain undiagnosed from lack of awareness, difficulty in diagnosis, a tendency to attribute bleeding to other causes, and variable symptoms (Paper, 2003). Symptoms include excessive bruising, prolonged nosebleeds, and prolonged oozing from wounds after surgery and after childbirth. The goal of therapy is to correct the defect in platelet adhesiveness by raising the level of von Willebrand factor with medications (Bjoring & Baxi, 2004).

## Disseminated Intravascular Coagulation

DIC is a life-threatening, acquired pathologic process in which the clotting system is abnormally activated, resulting in widespread clot formation in the small vessels throughout the body (London et al., 2003). It can cause postpartum hemorrhage by altering the blood clotting mechanism. DIC is always a secondary diagnosis that occurs as a complication of abruptio placentae, amniotic fluid embolism, intrauterine fetal death with prolonged retention of the fetus, severe preeclampsia, septicemia, and hemorrhage. Clinical features include petechiae, ecchymoses, bleeding gums, tachycardia, uncontrolled bleeding during birth, and acute renal failure (Higgins, 2004). Treatment goals are to maintain tissue perfusion through aggressive administration of fluid therapy, oxygen, and blood products.

## Nursing Management

Pregnancy and childbirth involve significant health risks, even for women with no preexisting health problems. There are an estimated 14 million cases of pregnancy-related hemorrhage every year, with some of these women bleeding to death. Most of these deaths occur within 4 hours of giving birth and are a result of problems during the third stage of labor (MacMullen et al., 2005). The period after the birth and the first hours postpartum are crucial times for the prevention, assessment, and management of bleeding. Compared with other maternal risks such as infection, bleeding can rapidly become life-threatening, and nurses, along with other health care providers, need to identify this condition quickly and intervene appropriately.

### Assessment

Since the most common cause of immediate severe postpartum hemorrhage is uterine atony (failure of the uterus to properly contract after birth), assessing uterine tone after birth by palpating the fundus for firmness and location is essential. A soft, boggy fundus indicates uterine atony. A soft, boggy uterus that deviates from the midline suggests a full bladder interfering with uterine involution. If the uterus is not in correct position (midline), it will not be able to contract to control bleeding.

Assess the amount of bleeding. If bleeding continues even though there are no lacerations, suspect retained placental fragments. The uterus remains large with painless dark-red blood mixed with clots. This cause of hemorrhage can be prevented by carefully inspecting the placenta for intactness.

If trauma is suspected, attempt to identify the source and document it. Typically, the uterus will be firm with a steady stream or trickle of unclotted bright-red blood noted in the perineum. Most deaths from postpartum hemorrhage are not due to gross bleeding, but rather to inadequate management of slow, steady blood loss (Olds et al., 2004).

Assessment for a suspected hematoma would reveal a firm uterus with bright-red bleeding. Observe for a localized bluish bulging area just under the skin surface in the perineal area (Fig. 22-1). Often, the woman will report severe perineal or pelvic pain and will have difficulty voiding. In addition, she will have hypotension, tachycardia, and anemia (Higgins, 2004).

Assessment for coagulopathies as a cause of postpartum hemorrhage would reveal prolonged bleeding from the gums and venipuncture sites, petechiae on the skin, and ecchymotic areas. The amount of lochia would be much greater also. Urinary output would be diminished, with signs of acute renal failure. Vital signs would show an increase in pulse rate and a decrease in level of consciousness. Signs of shock do not appear until hemorrhage is far advanced due to the increased fluid and blood volume of pregnancy.

### Nursing Interventions

Massage the uterus if uterine atony is noted. The uterine muscles are sensitive to touch; massage aids in stimulating the muscle fibers to contract. Massage the boggy uterus while supporting the lower uterine segment to stimulate contractions and expression of any accumulated blood clots. As blood pools in the vagina, stasis of blood causes clots to form; they need to be expelled as pressure is placed on the fundus. Overly forceful massage can tire the uterine muscles, resulting in further uterine atony and increased pain. See Nursing Procedure 22-1 for the steps in massaging the fundus.

If repeated fundal massage and expression of clots fail, medication is probably needed to contract the uterus to control bleeding from the placental site. The injection

of a uterotonic drug immediately after birth is an important intervention used to prevent postpartum hemorrhage. Oxytocin (Pitocin); methylergonovine maleate (Methergine); ergonovine maleate (Ergotrate); a synthetic analog of prostaglandin E1 misoprostol (Cytotec); and prostaglandin (PGF<sub>2a</sub>, Prostin/15m, Hemabate) are drugs used to manage postpartum hemorrhage (Drug Guide 22-1). The choice of which uterotonic drug to use for management of bleeding depends on the clinical judgment of the health care provider, the availability of drugs, and the risks and benefits of the drug.

Maintain the primary IV infusion and be prepared to start a second infusion at another site in case blood transfusions are necessary. Draw blood for type and cross-match and send it to the laboratory. Administer oxytocics as ordered, correlating and titrating the IV medication infusion rate to assessment findings of uterine firmness and lochia. Assess for visible vaginal bleeding, and count or weigh perineal pads: 1 g of pad weight is equivalent to 1 mL of blood loss (Green & Wilkinson, 2004).

Check vital signs every 15 to 30 minutes, depending on the acuity of the mother's health status. Monitor her complete blood count to identify any deficit or assess the adequacy of replacement. In addition, assess the woman's level of consciousness to determine changes that may result from inadequate cerebral perfusion.

If a full bladder is present, assist the woman to empty her bladder to reduce displacement of the uterus. If the woman cannot void, anticipate the need to catheterize her to relieve bladder distention.

Retained placental fragments usually are manually separated and removed by the birth attendant. Be sure that the birth attendant remains long enough after birth to assess the bleeding status of the woman and determine the etiology. Assist the birth attendant with suturing any lacerations immediately to control hemorrhage and repair the tissue.

For the woman who develops ITP, glucocorticoids, intravenous immunoglobulin, intravenous anti-Rho D, and platelet transfusions may be administered. A splenectomy may be needed if the bleeding tissues do not respond to medical management.

In vWD, there is a decrease in von Willebrand factor, which is necessary for platelet adhesion and aggregation. It binds to and stabilizes factor VIII of the coagulation cascade (Bjoring & Baxi, 2004). Desmopressin, a synthetic form of vasopressin (antidiuretic hormone), may be used to treat vWD. This drug stimulates the release of stored factor VIII and von Willebrand factor from the lining of blood vessels, which increases platelet adhesiveness and shortens bleeding time. Other treatments that may be ordered include clotting factor concentrates, replacement of von Willebrand factor and factor VIII (Alphanate, Humate-P); antifibrinolytics (Amicar); and nonsteroidal anti-inflammatory drugs (NSAIDs) that do not cause platelet dysfunction (Bextra) (Paper, 2003).



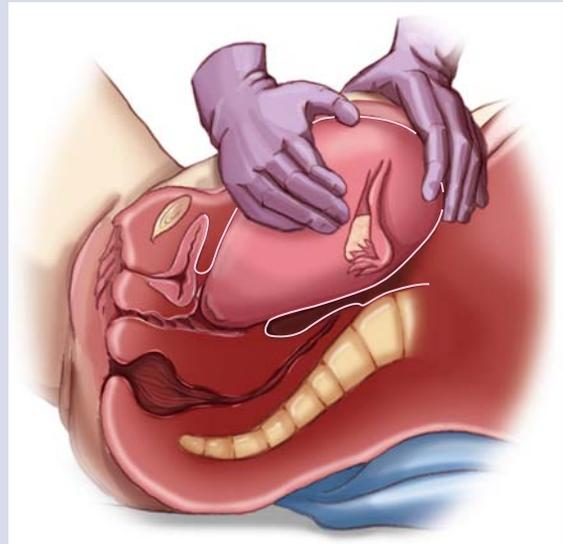
● Figure 22-1 Perineal hematoma. Note the bulging, swollen mass.

## Nursing Procedure 22-1

### Massaging the Fundus

#### Purpose: To Promote Uterine Contraction

1. After explaining the procedure to the woman, place one gloved hand (usually the dominant hand) on the fundus.
2. Place the other gloved hand on the area above the symphysis pubis (this helps to support the lower uterine segment).
3. With the hand on the fundus, gently massage the fundus in a circular manner. Be careful not to overmassage the fundus, which could lead to muscle fatigue and uterine relaxation.
4. Assess for uterine firmness (uterine tissue responds quickly to touch).
5. If firm, apply gentle yet firm pressure in a downward motion toward the vagina to express any clots that may have accumulated.
6. Do not attempt to express clots until the fundus is firm because the application of firm pressure on an uncontracted uterus could cause uterine inversion, leading to massive hemorrhage.
7. Assist the woman with perineal care and applying a new perineal pad.
8. Remove gloves and wash hands.



Be alert for women with abnormal bleeding tendencies, ensuring that they receive proper diagnosis and treatment. Teach them how to prevent severe hemorrhage by learning how to feel for and massage their fundus when boggy, assisting the nurse to keep track of the number of and amount of bleeding on perineal pads, and avoiding any medications with antiplatelet activity such as aspirin, antihistamines, or NSAIDs.

If the woman develops DIC, institute emergency measures to control bleeding and impending shock and prepare to transfer her to the intensive care unit. Identification of the underlying condition and elimination of the causative factor are essential to correct the coagulation problem. Be ready to replace fluid volume, administer blood component therapy, and optimize the mother's oxygenation and perfusion status to ensure adequate cardiac output and end-organ perfusion. 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 signs of bleeding, including spontaneous bleeding from gums or nose, petechiae, excessive bleeding from the cesarean incision site, hematuria, and blood in the stool. These findings correlate with decreased blood volume,

decreased organ and peripheral tissue perfusion, and clots in the microcirculation (Green & Wilkinson, 2004).

Institute measures to avoid tissue trauma or injury, such as giving injections and drawing blood. Also provide emotional support to the client and her family throughout this critical time by being readily available and providing explanations and reassurance.

### Thromboembolic Conditions

A thrombosis (blood clot within a blood vessel) can cause an inflammation of the blood vessel lining (**thrombophlebitis**) which in turn can lead to a possible thromboembolism (obstruction of a blood vessel by a blood clot carried by the circulation from the site of origin). Thrombi can involve the superficial or deep veins in the legs or pelvis. Superficial venous thrombosis usually involves the saphenous venous system and is confined to the lower leg. Superficial thrombophlebitis may be caused by the use of the lithotomy position in some women during birth. Deep venous thrombosis can involve deep veins from the foot to the calf, to the thighs, or pelvis. In both locations, thrombi can dislodge and migrate to the lungs, causing a pulmonary embolism.

## Drug Guide 22-1 Drugs Used to Control Postpartum Hemorrhage

Drug	Action/Indication	Nursing Implications
Oxytocin (Pitocin)	Stimulates the uterus to contract/ to contract the uterus to control bleeding from the placental site	Assess fundus for evidence of contraction and compare amount of bleeding every 15 minutes or according to orders. Monitor vital signs every 15 minutes. Monitor uterine tone to prevent hyperstimulation. Reassure client about the need for uterine contraction and administer analgesics for comfort. Offer explanation to client and family about what is happening and the purpose of the medication. Provide nonpharmacologic comfort measures to assist with pain management. Set up the IV infusion to be piggybacked into a primary IV line. This ensures that the medication can be discontinued readily if hyperstimulation or adverse effects occur while maintaining the IV site and primary infusion.
Methylergonovine maleate (Methergine)	Stimulates the uterus/to prevent and treat postpartum hemorrhage due to atony or subinvolution	Assess baseline bleeding, uterine tone, and vital signs every 15 minutes or according to protocol. Offer explanation to client and family about what is happening and the purpose of the medication. Monitor for possible adverse effects, such as hypertension, seizures, uterine cramping, nausea, vomiting, and palpitations. Report any complaints of chest pain promptly.
Ergonovine maleate (Ergotrate)	Stimulates uterine contractions/ to control postpartum or post-abortion hemorrhage	Assess baseline bleeding, uterine tone, and vital signs every 15 minutes or according to protocol. Offer explanation to client and family about what is happening and the purpose of the medication. Monitor for possible adverse effects, such as nausea, vomiting, weakness, muscular pain, headache, or dizziness.
Prostaglandin (PGF-2 $\alpha$ , Prostin/15m, Hemabate)	Stimulates uterine contractions/ to treat postpartum hemorrhage due to uterine atony when not controlled by other methods	Assess vital signs, uterine contractions, client's comfort level, and bleeding status as per protocol. Offer explanation to client and family about what is happening and the purpose of the medication. Monitor for possible adverse effects, such as fever, chills, headache, nausea, vomiting, diarrhea, flushing, and bronchospasm.

Pulmonary embolism is a potentially fatal condition that occurs when the pulmonary artery is obstructed by a blood clot that has traveled from another vein into the lungs, causing an obstruction and infarction. When the clot is large enough to block one or more of the pulmonary vessels that supply the lungs, it can result in sudden death. Pulmonary embolism is the second leading cause of pregnancy-related deaths in the United States (Green & Wilkinson, 2004). In the United States, more women die of it each year than from car accidents, breast cancer, or AIDS (Goldhaber, 2003). Many of these deaths can be prevented by the routine use of simple measures:

- Developing public awareness about risk factors, symptoms, and preventive measures
- Preventing venous stasis by encouraging activity that causes leg muscles to contract and promotes venous return (leg exercises and walking)
- Using intermittent sequential compression devices to produce passive leg muscle contractions until the woman is ambulatory
- Elevating the woman's legs above her heart level to promote venous return
- Stopping smoking to reduce or prevent vascular vasoconstriction
- Applying compression stockings and removing them daily for inspection of legs
- Performing passive range-of-motion exercises while in bed
- Using postoperative deep-breathing exercises to improve venous return by relieving the negative thoracic pressure on leg veins
- Reducing hypercoagulability with the use of warfarin, aspirin, and heparin
- Preventing venous pooling by avoiding pillows under knees, not crossing legs for long periods, and not leaving legs up in stirrups for long periods
- Padding stirrups to reduce pressure against the popliteal angle
- Avoiding sitting or standing in one position for prolonged periods
- Using a bed cradle to keep linens and blankets off extremities
- Avoiding trauma to legs to prevent injury to the vein wall
- Increasing fluid intake to prevent dehydration
- Avoiding the use of oral contraceptives

## Etiology

The major causes of a thrombus formation (blood clot) are venous stasis, injury to the innermost layer of the blood vessel, and hypercoagulation. Venous stasis and hypercoagulation are both common in the postpartum period. Other factors that place women at risk for thrombosis include prolonged bed rest, diabetes, obesity, cesarean birth, smoking, progesterone-induced distensibility of the veins of the lower legs during pregnancy, severe anemia, his-

tory of previous thrombosis, varicose veins, diabetes mellitus, advanced maternal age (>35), multiparity, and use of oral contraceptives before pregnancy (Trizna & Goldman, 2005).

## Nursing Management

The three most common thromboembolic conditions occurring during the postpartum period are superficial venous thrombosis, deep venous thrombosis, and pulmonary embolism. Although thromboembolic disorders occur in less than 1% of all postpartum women, pulmonary embolism can be fatal if a clot obstructs the lung circulation; thus, early identification and treatment are paramount.

Prevention of thrombotic conditions is an essential aspect of nursing management. In women at risk, early ambulation is the easiest and most cost-effective method. Use of elastic compression stockings (TED hose or Jobst stockings) decrease distal calf vein thrombosis by decreasing venous stasis and augmenting venous return (McKinney et al., 2005). Women who are at a high risk for thromboembolic disease based on risk factors or previous history of deep vein thrombosis or pulmonary embolism may be placed on prophylactic heparin therapy during pregnancy. Standard heparin or a low-molecular-weight heparin such as enoxaparin (Lovenox) can be given, since neither one crosses the placenta. It is typically discontinued during labor and birth and then restarted during the postpartum period.

## Assessment

Assess the woman closely for risk factors and signs and symptoms of thrombophlebitis. Look for risk factors in the woman's history such as use of oral contraceptives before the pregnancy, employment that necessitates prolonged standing, history of thrombophlebitis or endometritis, or evidence of current varicosities. Suspect superficial venous thrombosis in a woman with varicose veins who reports tenderness and discomfort over the site of the thrombosis, most commonly in the calf area. The area appears reddened along the vein and is warm to the touch. The woman will report increased pain in the affected leg when she ambulates and bears weight.

Manifestations of deep venous thrombosis are often absent and diffuse. If they are present, they are caused by an inflammatory process and obstruction of venous return. Calf swelling, erythema, warmth, tenderness, and pedal edema may be noted. A positive Homans sign (pain in the calf upon dorsiflexion) is not a definitive diagnostic sign because pain can also be caused by a strained muscle or contusion (Engstrom, 2004).

Assess for signs and symptoms of pulmonary embolism, including unexplained sudden onset of shortness of breath, tachypnea, sudden chest pain, tachycardia, cardiac arrhythmias, apprehension, profuse sweating, hemoptysis, and sudden change in mental status as a result of hypox-

emia (Lewis et al., 2004). Expect a lung scan to be done to confirm the diagnosis.

### Nursing Interventions

For the woman with superficial venous thrombosis, care includes administering NSAIDs for analgesia, providing for rest and elevation of the affected leg, applying warm compresses to the affected area to promote healing, and using antiembolism stockings to promote circulation to the extremities.

Nursing interventions for a woman with deep vein thrombosis includes bed rest and elevation of the affected extremity to decrease interstitial swelling and promote venous return from that leg. Apply antiembolism stockings to both extremities as ordered. Fit the stockings correctly and urge the woman to wear them at all times. Sequential compression devices can also be used for women with varicose veins, a history of thrombophlebitis, or a surgical birth. Anticoagulant therapy using a continuous IV infusion of heparin is started to prolong blood clotting time and prevent extension of the thrombosis. Monitor the woman's coagulation studies closely; these might include activated partial thromboplastin time (APTT), whole blood partial thromboplastin time, and platelet levels. A therapeutic APTT values typically ranges from 35 to 45 seconds, depending on which standard values are used (Cavanaugh, 2003). Also apply warm moist compresses to the affected leg and administer analgesics as ordered to decrease the discomfort.

After several days of IV heparin therapy, expect to begin oral anticoagulant therapy with warfarin (Coumadin) as ordered. In most cases, the woman will continue to take this medication for several months after discharge. Provide teaching about the use of anticoagulant therapy and possible danger signs (Teaching Guidelines 22-1).

For the woman who develops a pulmonary embolism, institute emergency measures immediately. The objectives of treatment are to prevent further growth or multiplication of thrombi in the lower extremities, prevent further thrombi from traveling to the pulmonary vascular system, and provide cardiopulmonary support if needed. Interventions include administering oxygen via mask or cannula and continuous IV heparin titrated according to the laboratory results, maintaining the client on bed rest, and administering analgesics for pain relief. Thrombolytic agents, such as tPA, might be used to dissolve pulmonary emboli and the source of the thrombus in the pelvis or deep leg veins, thus reducing the potential for a recurrence.

Additional interventions would include anticipatory guidance, support, and education about anticoagulants and associated signs of complications and risks. Focus discharge teaching on the following issues:

- Elimination of modifiable risk factors for deep vein thrombosis (smoking, use of oral contraceptives, a sedentary lifestyle, and obesity)
- Importance of using compression stockings



### TEACHING GUIDELINES 22-1

#### Teaching to Prevent Bleeding Related to Anticoagulant Therapy

- Watch for possible signs of bleeding and notify your health care provider if any occur:
    - Nosebleeds
    - Bleeding from the gums or mouth
    - Black tarry stools
    - Brown “coffee ground” vomitus
    - Red to brown speckled mucus from a cough
    - Oozing at incision, episiotomy site, cut, or scrape
    - Pink, red, or brown-tinged urine
    - Bruises, “black and blue marks”
    - Increased lochia discharge (from present level)
  - Practice measures to reduce your risk of bleeding:
    - Brush your teeth gently using a soft toothbrush.
    - Use an electric razor for shaving.
    - Avoid activities that could lead to injury, scrapes, bruising, or cuts.
    - Do not use any over-the-counter products containing aspirin or aspirin-like derivatives.
    - Avoid consuming alcohol.
    - Inform other health care providers about the use of anticoagulants, especially dentists.
  - Be sure to comply with follow-up laboratory testing as scheduled.
  - If you accidentally cut or scrape yourself, apply firm direct pressure to the site for 5 to 10 minutes. Do the same after receiving any injections or having blood specimens drawn.
  - Wear an identification bracelet or band that indicates that you are taking an anticoagulant.
- Avoidance of constrictive clothing and prolonged standing or sitting in a motionless, leg-dependent position
  - Danger signs and symptoms (sudden onset of chest pain, dyspnea, and tachypnea) to report to the health care provider

### Postpartum Infection

Infection during the postpartum period is a common cause of maternal morbidity and mortality. Overall, postpartum infection is estimated to occur in up to 8% of all births. There is a higher occurrence in cesarean births than in vaginal births (Gibbs et al., 2004). The incidence of postpartum infections is expected to increase because of the earlier discharge of postpartum women from the hospital (Kennedy, 2005).

Postpartum infection is defined as a fever of 38°C or 100.4°F 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 (Olds et al., 2004). 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. Because today women are commonly discharged 24 to 48 hours after giving birth, nurses must assess new mothers for risk factors and identify early subtle signs and symptoms of an infectious process. Common postpartum infections include metritis, wound infections, urinary tract infections, and mastitis.

## Etiology

The common bacterial etiology of postpartum infections involves organisms that constitute the normal vaginal flora, typically a mix of aerobic and anaerobic species. Postpartum infections generally are polymicrobial and involve the following microorganisms: *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 (Higgins, 2004).

Factors that place a woman at risk for a postpartum infection are highlighted in Box 22-2.

## Clinical Manifestations

A postpartum infection is associated with an elevation in temperature, as mentioned previously. Other generalized signs and symptoms may include chills, headache, malaise, restlessness, anxiety, and tachycardia. In addition, the woman may exhibit specific signs and symptoms based on the type and location of the infection (Table 22-1).

## Metritis

Although usually referred to clinically as 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. Extension of metritis can result in parametritis, which involves the broad ligament and possibly the ovaries and fallopian tubes, or septic pelvic thrombophlebitis, which results when the infection spreads along venous routes into the pelvis (Kennedy, 2005).

The uterine cavity is sterile until rupture of the amniotic sac. As a consequence of labor, birth, and associated manipulations, anaerobic and aerobic bacteria can contaminate the uterus. In most cases, 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*.

The risk of metritis increases dramatically after a cesarean birth; it complicates from 10% to 20% of cesarean births. This is typically an extension of chorioamnionitis that was present before birth (indeed, that may have been why the cesarean birth was performed). In addition, trauma to the tissues and a break in the skin (incision) provide entrances for bacteria to enter the body and multiply (Kennedy, 2005).

Primary prevention of metritis is key and focuses on reducing the risk factors and incidence of cesarean births. When metritis occurs, broad-spectrum antibiotics are used to treat the infection. Management also includes measures to restore and promote fluid and electrolyte balance, provide analgesia, and provide emotional support. In most treated women, reduction of fever and elimination of symptoms will occur within 48 to 72 hours after the start of antibiotic therapy.

## Wound Infections

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 (Fig. 22-2). Wound infections are usually not identified until the woman has been discharged from the hospital because symptoms may not show up until 24 to 48 hours after birth. Because some infections may not manifest until after discharge, instructions about signs and symptoms to look for should be included in all discharge teaching. When a low-grade fever (<100.4°F), poor appetite, and a low energy level persist for a few days, a wound infection should be suspected.

Management for wound infections involves recognition of the infection, followed by opening of the wound to allow drainage. Aseptic wound management with sterile gloves and frequent dressing changes if applicable, good handwashing, frequent perineal pad changes, hydration, and ambulation to prevent venous stasis and improve circulation are initiated to prevent development of a more serious infection or spread of the infection to adjacent structures. Parenteral antibiotics are the mainstay of treatment. Analgesics are also important, because women often experience discomfort at the wound site.

## Urinary Tract Infections

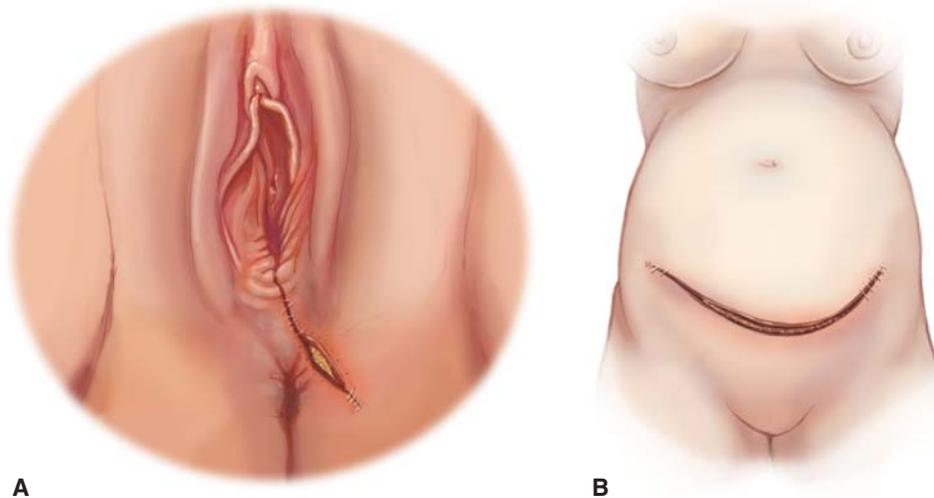
Urinary tract infections are most commonly caused by bacteria often found in bowel flora, including *E. coli*, *Klebsiella*, *Proteus*, and *Enterobacter* species. Any form of invasive manipulation of the urethra, such as urinary catheterization, frequent vaginal examinations, and genital trauma increase the likelihood of a urinary tract infection. Treatment consists of administering fluids if dehydration exists and antibiotics if appropriate.

**FACTORS PLACING A WOMAN AT RISK FOR POSTPARTUM INFECTION**

- Prolonged (>6 hours) premature rupture of membranes (removes the barrier of amniotic fluid so bacteria can ascend)
- Cesarean birth (allows bacterial entry due to break in protective skin barrier)
- Urinary catheterization (could allow entry of bacteria into bladder due to break in aseptic technique)
- Regional anesthesia that decreases perception to void (causes urinary stasis and increases risk of urinary tract infection)
- Staff attending to woman are ill (promotes droplet infection from personnel)
- Compromised health status, such as anemia, obesity, smoking, drug abuse (reduces the body’s immune system and decreases ability to fight infection)
- Preexisting colonization of lower genital tract with bacterial vaginosis, *Chlamydia trachomatis*, group B streptococci, *Staphylococcus aureus*, and *Escherichia coli* (allows microbes to ascend)
- Retained placental fragments (provides medium for bacterial growth)
- Manual removal of a retained placenta (causes trauma to the lining of the uterus and thus opens up sites for bacterial invasion)
- Insertion of fetal scalp electrode or intrauterine pressure catheters for internal fetal monitoring during labor (provides entry into uterine cavity)
- Instrument-assisted childbirth, such as forceps or vacuum extraction (increases risk of trauma to genital tract, which provides bacteria access to grow)
- Trauma to the genital tract, such as episiotomy or lacerations (provides a portal of entry for bacteria)
- Prolonged labor with frequent vaginal examinations to check progress (allows time for bacteria to multiply and increases potential exposure to microorganisms or trauma)
- Poor nutritional status (reduces body’s ability to repair tissue)
- Gestational diabetes (decreases body’s healing ability and provides higher glucose levels on skin and in urine, which encourages bacterial growth)
- Break in aseptic technique during surgery or birthing process by the birth attendant or nurses (allows entry of bacteria)

**Table 22-1** Signs and Symptoms of Postpartum Infections

Postpartum Infection	Signs and Symptoms
Metritis	Lower abdominal tenderness or pain on one or both sides Temperature elevation (>38°C) Foul-smelling lochia Anorexia Nausea Fatigue and lethargy Leukocytosis and elevated sedimentation rate
Wound infection	Weeping serosanguineous or purulent drainage Separation of or unapproximated wound edges Edema Erythema Tenderness Discomfort at the site Maternal fever Elevated white blood cell count
Urinary tract infection	Urgency Frequency Dysuria Flank pain Low-grade fever Urinary retention Hematuria Urine positive for nitrates Cloudy urine with strong odor
Mastitis	Flulike symptoms, including malaise, fever, and chills Tender, hot, red, painful area on one breast Inflammation of breast area Breast tenderness Cracking of skin or around nipple or areola Breast distention with milk



● Figure 22-2 Postpartum wound infections. (A) Infected episiotomy site. (B) Infected cesarean birth incision.

## Mastitis

A common problem that may occur within the first 2 weeks postpartum is an inflammation of the breast termed **mastitis**. It can be caused by a missed infant feeding, a bra that is too tight, poor drainage of duct and alveolus, or an infection. The most common infecting organism is *S. aureus*, which comes from the breastfeeding infant's mouth or throat (Kennedy, 2005). Infection can be transmitted from the lactiferous ducts to a secreting lobule, from a nipple fissure to periductal lymphatics, or by circulation (Youngkin & Davis, 2004) (Fig. 22-3).

The diagnosis is usually made without a culture being taken. Unless mastitis is treated adequately, it may progress to a breast abscess. Treatment of mastitis focuses on two areas: emptying the breasts and controlling the infection. The breast can be emptied either by the infant sucking or by manual expression. Increasing the frequency of nursing is advised. Lactation need not be suppressed. Control of infection is achieved with antibiotics. In addition, ice or warm packs and analgesics may be needed.

## Nursing Management

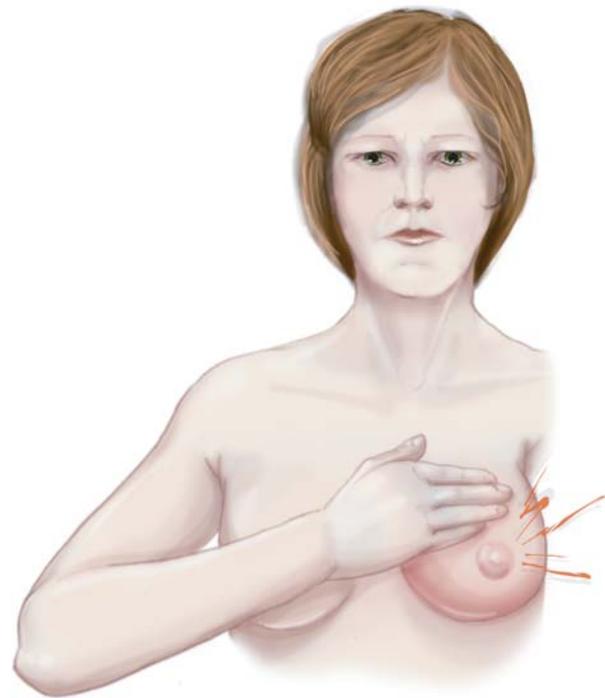
Perinatal nurses are primary caregivers for postpartum women and have the unique opportunity to identify subtle changes that place women at risk for infection. Nurses play a key role in identifying signs and symptoms that suggest a postpartum infection. Client teaching about danger signs and symptoms also is a priority due to today's short lengths of stay after delivery. (See Nursing Care Plan 22-1.)

## Assessment

Review the client's history and physical examination and labor and birth record for factors that might increase her risk for developing an infection. Then complete the assess-

ment (using the "BUBBLE-HE" parameters discussed in Chapter 16), paying particular attention to areas such as the abdomen and fundus, breasts, urinary tract, episiotomy, lacerations, or incisions, being alert for signs and symptoms of infection (see Table 22-1).

When assessing the episiotomy site, use the acronym "REEDA" (redness, erythema or ecchymosis, edema, drainage or discharge, and approximation of wound edges) to ensure complete evaluation of the site (Engstrom, 2004).



● Figure 22-3 Mastitis.

## Nursing Care Plan 22-1

### Overview of the Woman with a Postpartum Complication

Jennifer, a 16-year-old G1P1, gave birth to a boy by cesarean 3 days ago due to cephalopelvic disproportion following 25 hours of labor with ruptured membranes. Her temperature is 102.6°F (39.2°C). She is complaining of chills and malaise and severe pain at the incision site. The site is red and warm to the touch with purulent drainage. Jennifer's lochia is scant and dark red, with a strong odor. She tells the nurse to take her baby back to the nursery because she doesn't feel well enough to care for him.



#### Nursing Diagnosis: Ineffective thermoregulation related to bacterial invasion

##### Outcome identification and evaluation

Jennifer's body temperature decreases from current level and *remains within acceptable parameters for the next 24 hours*

##### Interventions with rationales

Assess vital signs every 2 to 4 hours and record results *to monitor progress of infection.*  
 Offer cool bed bath or shower *to reduce temperature.*  
 Place cool cloth on forehead and/or back of neck *for comfort.*  
 Change bed linen and gown when damp from diaphoresis *to provide comfort and hygiene.*  
 Administer antipyretics as ordered *to reduce temperature.*  
 Administer antibiotic therapy and wound care as ordered *to treat infection.*  
 Use aseptic technique *to prevent spread of infection.*  
 Force fluids to 2,000 mL per shift *to hydrate patient.*  
 Document intake and output *to assess hydration status.*

#### Nursing Diagnosis: Acute pain related to infectious process

Patient reports decreased pain as evidenced by *pain rating of 0 or 1 on pain scale; client verbalizes no complaints and can rest comfortably.*

Place client in semi-Fowler's position *to facilitate drainage and relieve pressure.*  
 Assess pain level on pain scale of 0 to 10 *to describe pain objectively.*  
 Assess fundus gently *for appropriate involution changes.*  
 Administer analgesics as needed and on time as ordered *to maintain pain relief.*  
 Provide for rest periods *to allow for healing process.*  
 Encourage good dietary intake *to promote healing.*  
 Assist with positioning in bed with pillows *to promote comfort.*  
 Offer a backrub *to ease aches and discomfort if desired.*

(continued)

## Overview of the Woman with a Postpartum Complication (continued)

### Nursing Diagnosis: Risk for impaired parental/infant attachment related to effects of postpartum infection

#### Outcome identification and *evaluation*

Client begins to bond with newborn appropriately with each exposure; *expresses positive feelings toward newborn when holding him; demonstrates ability to care for newborn when feeling better; states that she has help and support at home so she can focus on newborn.*

#### Interventions with *rationales*

- Promote adequate rest and sleep *to promote healing.*
- Bring newborn to mother after she is rested and had an analgesic *to allow mother to focus her energies on the child.*
- Progressively allow the client to care for her infant or comfort him as her energy level and pain level improve *to promote self-confidence in caring for the newborn.*
- Offer praise and positive reinforcement for care-taking tasks; stress positive attributes of newborn to mother while caring for him *to facilitate bonding and attachment.*
- Contact family members to participate in care of the newborn *to allow mother to rest and recover from infection.*
- Encourage mother to care for herself first and then the newborn *to ensure adequate energy for newborn's care.*
- Arrange for assistance and support after discharge from hospital *to aid in providing necessary backup.*
- Refer to community health nurse *for follow-up care of mother and newborn at home.*

Monitor the woman's vital signs, especially her temperature, for changes that may signal an infection.

### Nursing Interventions

Nursing care focuses on preventing postpartum infections. Use the following guidelines to help 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 handwashing technique before, after, and in between each patient care activity.
- Reinforce measures for maintaining good perineal hygiene.
- Use adequate lighting and turn the client to 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.

Client teaching is essential. Review the signs and symptoms of infection, emphasizing the danger signs and symptoms that need to be reported to the health care provider. Most importantly, stress proper handwashing, especially after perineal care and before and after breastfeeding. Also reinforce measures to promote breastfeeding, including proper breast care (see Chapter 16).

If the woman develops an infection, also review treatment measures, such as antibiotic therapy if ordered,

and any special care measures, such as dressing changes. Teaching Guidelines 22-2 highlights the major teaching points for a woman with a postpartum infection.

## Postpartum Emotional Disorders

The postpartum period involves extraordinary physiologic, psychological, and sociocultural changes in the life of a woman and her family. It is an exhilarating time for most women, but for others it may not be what they had expected. Women have varied reactions to their child-

bearing experiences, exhibiting a wide range of emotions. Typically, the delivery of a newborn is associated with positive feelings such as happiness, joy, and gratitude for the birth of a healthy infant. However, women may also feel weepy, overwhelmed, or unsure of what is happening to them. They may experience fear about loss of control; they may feel scared, alone, or guilty, or as if they have somehow failed.

Postpartum emotional disorders have been documented for years, but only recently have they received medical attention. Plummeting levels of estrogen and progesterone immediately after birth can contribute to postpartum mood disorders. It is believed that the greater the change in these hormone levels between pregnancy and postpartum, the greater the chance for developing a mood disorder (Elder, 2004).

Many types of emotional disorders occur in the postpartum period. Although their description and classification may be controversial, the disorders are commonly classified on the basis of their severity as postpartum or baby blues, postpartum depression, and postpartum psychosis.

### Postpartum or Baby Blues

Many postpartum women (approximately 50% to 85%) experience the “baby blues” (Suri & Altshuler, 2004). The woman exhibits mild depressive symptoms of anxiety, irritability, mood swings, tearfulness, increased sensitivity, and fatigue (Clay & Seehusen, 2004). The “blues” typically peak on postpartum days 4 and 5 and usually resolve by postpartum day 10. Although the woman’s symptoms may be distressing, they do not reflect psychopathology and usually do not affect the mother’s ability to function and care for her infant. Baby blues are usually self-limiting and require no formal treatment other than reassurance and validation of the woman’s experience, as well as assistance in caring for herself and the newborn. However, follow-up of women with postpartum blues is important, as up to 20% go on to develop postpartum depression (Henshaw et al., 2004).

### Postpartum Depression

Depression is more prevalent in women than in men, which may be related to biological, hormonal, and psychosocial factors. If the symptoms of postpartum blues last beyond 6 weeks and seem to get worse, the mother may be experiencing **postpartum depression**, a major depressive episode associated with childbirth (MacQueen & Chokka, 2004). As many as 20% of all mothers develop postpartum depression (Vieira, 2003). It affects approximately 500,000 mothers in the United States each year, and about half of these women receive no mental health evaluation or treatment (Horowitz & Goodman, 2005).

## TEACHING GUIDELINES 22-2

### Teaching for the Woman With a Postpartum Infection

- Continue your antibiotic therapy as prescribed.
  - Take the medication exactly as ordered and continue with the medication until it is finished.
  - Do not stop taking the medication even when you are feeling better.
- Check your temperature every day and call your health care provider if it is above 100.4°F (38°C).
- Watch for other signs and symptoms of infection, such as chills, increased abdominal pain, change in the color or odor of your lochia, or increased redness, warmth, swelling, or drainage from a wound site such as your cesarean incision or episiotomy. Report any of these to your health care provider immediately
- Practice good infection prevention:
  - Always wash your hands thoroughly before and after eating, using the bathroom, touching your perineal area, or providing care for your newborn.
  - Wipe from front to back after using the bathroom.
  - Remove your perineal pad using a front-to-back motion. Fold the pad in half so that the inner sides of the pad that were touching your body are against each other. Wrap in toilet tissue or place in a plastic bag and discard.
  - Wash your hands before applying a new pad.
  - Apply a new perineal pad using a front-to-back motion. Handle the pad by the edges (top and bottom or sides) and avoid touching the inner aspect of the pad that will be against your body.
  - When performing perineal care with the peri-bottle, angle the spray of water so that it flows from front to back.
  - Drink plenty of fluids each day and eat a variety of foods that are high in vitamins, iron, and protein.
  - Be sure to get adequate rest at night and periodically throughout the day.

**Consider THIS!**

As an assertive practicing attorney in her thirties, my first pregnancy was filled with nagging feelings of doubt about this upcoming event in my life. Throughout my pregnancy I was so busy with trial work that I never had time to really evaluate my feelings. I was always reading about the bodily changes that were taking place, and on one level I was feeling excited, but on another level I was emotionally drained. Shortly after the birth of my daughter, those suppressed nagging feelings of doubt surfaced big time and practically immobilized me. I felt exhausted all the time and was only too glad to have someone else care for my daughter. I didn't breastfeed because I thought it would tie me down too much. Although at the time I thought this "low mood" was normal for all new mothers, I have since found out it was postpartum depression. How could any woman be depressed about this wondrous event?

**Thoughts:** Now that postpartum depression has been "taken out of the closet" and recognized as a real emotional disorder, it can be treated. This woman showed tendencies during her pregnancy but was able to suppress the feelings and go forward. Her description of her depression is very typical of many women who suffer in silence, hoping to get over these feelings in time. What can nurses do to promote awareness of this disorder? Can it be prevented?

Unlike the postpartum blues, women with postpartum depression feel worse over time, and changes in mood and behavior do not go away on their own.

Several factors can increase a mother's risk of developing postpartum depression:

- History of previous depression
- History of postpartum depression
- Evidence of depressive symptoms during pregnancy
- Family history of depression
- Life stress
- Childcare stress
- Prenatal anxiety
- Lack of social support
- Relationship stress
- Difficult or complicated pregnancy
- Traumatic birth experience
- Birth of a high-risk or special-needs infant (Suri & Altshuler, 2004)

Postpartum depression affects not only the woman but also the entire family. Identifying depression early can substantially improve the client and family outcomes. Postpartum depression usually has a more gradual onset and becomes evident within the first 6 weeks postpartum. Some of the common manifestations are listed in Box 22-3.

Postpartum depression lends itself to prophylactic intervention because its onset is predictable, the risk

period for illness is well defined, and women at high risk can be identified using a screening tool. Prophylaxis starts with a prenatal risk assessment and education. Based on the woman's history of prior depression, prophylactic antidepressant therapy may be needed during the third trimester or immediately after giving birth. Management mirrors that of any major depression—a combination of antidepressant medication, antianxiety medication, and psychotherapy in an outpatient or inpatient setting (Pavlovich-Danis, 2004). Marital counseling may be necessary when marital problems may be contributing to the woman's depressive symptoms.

## Postpartum Psychosis

At the severe end of the continuum of postpartum emotional disorders is postpartum psychosis, which occurs in one or two women per 1,000 births (Elder, 2004). It generally surfaces within 3 weeks of giving birth. Symptoms of postpartum psychosis include sleep disturbances, fatigue, depression, and hypomania. The mother will be tearful, confused, and preoccupied with feelings of guilt and worthlessness. Early symptoms resemble those of depression, but they may escalate to delirium, hallucinations, anger toward herself and her infant, bizarre behavior, manifestations of mania, and thoughts of hurting herself and the infant. The mother frequently loses touch with reality and experiences a severe regressive breakdown, associated with a high risk of suicide or infanticide (MacQueen & Chokka, 2004).

Most women with postpartum psychosis are hospitalized for up to several months. Psychotropic drugs are almost always part of treatment, along with individual psychotherapy and support group therapy. The greatest hazard of postpartum psychosis is suicide. Infanticide and child abuse are also risks if the woman is left alone

### BOX 22-3

#### COMMON MANIFESTATIONS OF POSTPARTUM DEPRESSION

- Loss of pleasure or interest in life
- Low mood, sadness, tearfulness
- Exhaustion that is not relieved by sleep
- Feelings of guilt
- Irritability
- Inability to concentrate
- Anxiety
- Despair
- Compulsive thoughts
- Loss of libido
- Loss of confidence
- Sleep difficulties (insomnia)
- Loss of appetite
- Feelings of failure as a mother (Horowitz & Goodman, 2005)

with her infant. Early recognition and prompt treatment of this disorder is imperative.

## Nursing Management

Postpartum emotional disorders are often overlooked and go unrecognized despite the large percentage of women who experience them. The postpartum period is a time of increased vulnerability, but few women receive education about the possibility of depression after birth. In addition, many women may feel ashamed of having negative emotions at a time when they “should” be happy; thus, they don’t seek professional help. Nurses can play a major role in providing guidance about postpartum emotional disorders, detecting manifestations, and assisting women to obtain appropriate care.

## Assessment

Assessment should begin by reviewing the history to identify risk factors that could predispose them to depression:

- Poor coping skills
- Low self-esteem
- Numerous life stressors
- Mood swings and emotional stress
- Previous psychological problems or a family history of psychiatric disorders
- Substance abuse
- Limited social support networks

Be alert for possible physical findings. Assess the woman’s activity level, including her level of fatigue. Ask about her sleeping habits, noting any problems with insomnia. When interacting with the woman, observe for verbal and nonverbal indicators of anxiety as well as her ability to concentrate during the interaction. Difficulty concentrating and anxious behaviors suggest a problem. Also assess her nutritional intake: weight loss due to poor food intake may be seen. Assessment can identify women with a high-risk profile for depression, and the nurse can educate them and make referrals for individual or family counseling if needed.

## Nursing Interventions

Nursing interventions that are appropriate to assist any postpartum woman to cope with the changes of this period include:

- Encourage the client to verbalize her feelings of what she is going through.
- Recommend that the woman seek help for household chores and childcare.
- Stress the importance of good nutrition and adequate exercise and sleep.

- Encourage the client to develop a support system with other mothers.
- Assist the woman to structure her day to regain a sense of control.
- Emphasize the importance of keeping her expectations realistic.
- Discuss postponing major life changes, such as moving or changing jobs.
- Provide information about bodily changes (ICEA, 2003).

The nurse can play an important role in assisting women and their partners with postpartum adjustment. Providing facts about the enormous changes that can occur during the postpartum period is critical. Review the signs and symptoms of all three emotional disorders. This information is typically included as part of prenatal visits and childbirth education classes. Know the risk factors associated with these disorders and review the history of clients and their families. Use specific, nonthreatening questions to aid in early detection.

Discuss factors that may increase a woman’s vulnerability to stress during the postpartum period, such as sleep deprivation and unrealistic expectations, so couples can understand and respond to those problems if they occur. Stress that many women need help after childbirth and that help is available from many sources, including people they already know. Assisting women to learn how to ask for help is important so they can gain the support they need. Also provide educational materials about postpartum emotional disorders. Have available referral sources for psychotherapy and support groups appropriate for women experiencing postpartum adjustment difficulties.

## KEY CONCEPTS

- Postpartum hemorrhage is a potentially life-threatening complication of both vaginal and cesarean births. It is the leading cause of maternal mortality in the United States.
- A good way to remember the causes of postpartum hemorrhage is the “4 Ts”: tone, tissue, trauma, and thrombosis.
- Uterine atony is the most common cause of early postpartum hemorrhage, which can lead to hypovolemic shock.
- Oxytocin (Pitocin), methylergonovine maleate (Methergine), ergonovine maleate (Ergotrate), and prostaglandin (PGF2a, Prostin/15m, Hemabate) are drugs used to manage postpartum hemorrhage.
- Failure of the placenta to separate completely and be expelled interferes with the ability of the uterus to contract fully, thereby leading to hemorrhage.
- Causes of subinvolution are retained placental fragments, distended bladder, uterine myoma, and infection.

- Lacerations should always be suspected when the uterus is contracted and bright-red blood continues to trickle out of the vagina.
- Conditions that cause coagulopathies may include idiopathic thrombocytopenic purpura (ITP), von Willebrand disease (vWD), and disseminated intravascular coagulation (DIC).
- Pulmonary embolism is a potentially fatal condition that occurs when the pulmonary artery is obstructed by a blood clot that has traveled from another vein into the lungs, causing obstruction and infarction.
- The major causes of a thrombus formation (blood clot) are venous stasis and hypercoagulation, both common in the postpartum period.
- Postpartum infection is defined as a fever of 38°C or 100.4°F or higher after the first 24 hours after childbirth, occurring on at least 2 of the first 10 days exclusive of the first 24 hours.
- Common postpartum infections include metritis, wound infections, urinary tract infections, and mastitis.
- Postpartum emotional disorders are commonly classified on the basis of their severity: “baby blues,” postpartum depression, and postpartum psychosis.
- Management of postpartum depression mirrors the treatment of any major depression—a combination of antidepressant medication, antianxiety medication, and psychotherapy in an outpatient or inpatient setting.

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### Web Resources

A Place to Remember: [www.aplacetoremember.com](http://www.aplacetoremember.com)  
 Depression: [www.nlm.nih.gov/publicat/depwomenknows.cfm](http://www.nlm.nih.gov/publicat/depwomenknows.cfm)

Depression After Delivery, Inc. (D.A.D.):  
[www.depressionafterdelivery.com](http://www.depressionafterdelivery.com)  
 International Childbirth Educator's Association: [www.icea.org](http://www.icea.org)  
 LaLeche League & Breastfeeding Resource Center:  
[www.lalecheleague.org](http://www.lalecheleague.org)  
 Learning about von Willebrand Disease: [www.allaboutbleeding.com](http://www.allaboutbleeding.com)  
 National Hemophilia Foundation: [www.hemophilia.org](http://www.hemophilia.org)  
 National Institute of Mental Health: [www.nlm.nih.gov](http://www.nlm.nih.gov)  
 National Women's Health Information Center:  
[www.4women.gov](http://www.4women.gov)  
 Parents Helping Parents: [www.php.com](http://www.php.com)  
 Postpartum Support International: [www.postpartum.net](http://www.postpartum.net)  
 World Federation of Hemophilia: [www.wfh.org](http://www.wfh.org)

## Chapter WORKSHEET

### ● MULTIPLE CHOICE QUESTIONS

1. A postpartum mother appears very pale and states she is bleeding heavily. The nurse should *first*:
  - a. Call the client's health care provider immediately.
  - b. Immediately set up an intravenous infusion of magnesium sulfate.
  - c. Assess the fundus and ask her about her voiding status.
  - d. Reassure the mother that this is a normal finding after childbirth.
2. Hallucinations and expressions of suicide or infanticide are indicative of:
  - a. Postpartum psychosis
  - b. Postpartum anxiety disorder
  - c. Postpartum depression
  - d. Postpartum blues
3. The nurse assesses a woman closely in the first few hours after giving birth because which of the following could occur?
  - a. Thrombophlebitis
  - b. Breast engorgement
  - c. Uterine infection
  - d. Postpartum hemorrhage
4. Which of the following would the nurse expect to include in the plan of care for a woman with mastitis who is receiving antibiotic therapy?
  - a. Stop breastfeeding and apply lanolin.
  - b. Administer analgesics and bind both breasts.
  - c. Apply warm or cold compresses and give analgesics.
  - d. Remove the nursing bra and expose the breast to fresh air.

### ● CRITICAL THINKING EXERCISES

1. Mrs. Griffin had a 12-hour labor before a cesarean birth. Her membranes ruptured 6 hours before she came to the hospital. Her fetus showed signs of fetal distress, so internal electronic fetal monitoring was used. Her most recent test results indicate she is anemic.
  - a. What postpartum complication is this new mother at highest risk for? Why?
  - b. What assessments need to be done to detect this potential complication?
  - c. What nursing measures will the nurse use to prevent this complication?
2. Tammy, a 32-year-old G9P9, had a spontaneous vaginal birth 2 hours ago. Tammy has been having a baby each year for the past 9 years. Tammy's lochia has been heavy, with some clots. She hasn't been up to void since she had epidural anesthesia and has decreased sensation to her legs.
  - a. What factors place Tammy at risk for postpartum hemorrhage?
  - b. What assessments are needed before planning interventions?
  - c. What nursing actions are needed to prevent a postpartum hemorrhage?
3. Lucy, a 25-year-old G2P2, gave birth 2 days ago and is expected to be discharged today. She has a history of severe postpartum depression 2 years ago with her first child. Lucy has not been out of bed for the past 24 hours, is not eating, and provides no care for herself or her newborn. Lucy states she already has a boy at home and not having a girl this time is disappointing.
  - a. What factors/behaviors place Lucy at risk for an emotional disorder?
  - b. Which interventions might be appropriate at this time?
  - c. What education does the family need prior to discharge?

## ● STUDY ACTIVITIES

1. Compare and contrast postpartum blues, postpartum depression, and postpartum psychosis in terms of their unique features and medical management.
2. Select a website from the ones listed at the end of the chapter. Critique it regarding its helpfulness to parents, the correctness of the information supplied, and when was it last updated.
3. Interview a woman who has given birth and ask about any complications she may have had and what was most helpful to her during the experience.
4. The number-one cause of postpartum hemorrhage is \_\_\_\_\_.
5. When giving report to the nurse who will be caring for a woman and her newborn in the postpartum period, what information should the labor nurse convey?