

PUERPERAL INFECTION

Puerperal infection is an infection of the reproductive tract occurring within 28 days following childbirth or abortion. It is one of the major causes of maternal death (ranking second behind postpartal hemorrhage) and includes localized infectious processes as well as more progressive processes that may result in endometritis/metritis (inflammation of endometrium), peritonitis, or parametritis/pelvic cellulitis (infection of connective tissue of broad ligament and possibly connective tissue of all pelvic structures).

(This plan of care is an adjunct to the regular postpartal plans of care.)

CLIENT ASSESSMENT DATA BASE

Activity/Rest

Malaise, lethargy

Exhaustion and/or ongoing fatigue (prolonged labor, multiple postpartal stressors)

Circulation

Tachycardia of varying severity

Elimination

Diarrhea may be present.

Bowel sounds may be absent if paralytic ileus occurs.

Ego Integrity

Marked anxiety (peritonitis)

Food/Fluid

Anorexia, nausea/vomiting

Thirst, dry mucous membranes

Abdominal distension, rigidity, rebound tenderness (peritonitis)

Hygiene

Lack of or inadequate perineal care

Neurosensory

Headache

Pain/Discomfort

Localized pain, dysuria, abdominal discomfort

Severe or prolonged afterpains, lower abdominal or uterine pain and tenderness with guarding (endometritis)

Unilateral/bilateral abdominal pain/rigidity (salpingitis/oophoritis, parametritis)

Respiration

Rapid/shallow respirations (severe/systemic process)

Safety

Temperature: 100.4°F (38.0°C) or higher, occurring on any 2 successive days but excluding the first 24 hr postpartum, is indicative of infection; however, temperature higher than 101°F (38.3°C) in the first 24 hr is highly indicative of ensuing infection (although persistent low-grade fever during this time may also reflect infectious process).
Low-grade fever of less than 101°F (38.3°C) suggests incisional infection; fever greater than 102°F (38.8°C) is indicative of more extensive infection (e.g., salpingitis, parametritis, peritonitis).
Chills may occur; severe/recurrent chills (often lasting 30–40 min), with temperature spikes to 104°F (40.0°C), suggest pelvic infections, thrombophlebitis, or peritonitis.
Reports of internal monitoring, frequent intrapartum vaginal examinations, lapses in aseptic technique, traumatic delivery and/or lacerations of reproductive tract, operative procedures/incisions.
Preexisting infections, including human immunodeficiency virus (HIV).
Environmental exposure.

Sexuality

Premature or prolonged rupture of membranes, prolonged labor (24 hr or more).
Retention of products of conception, uterine exploration/manual removal of placenta, or postpartum hemorrhage.
Incision edges may be reddened, edematous, firm, tender, or separated, with drainage of purulent or sanguineous liquid.
Uterine subinvolution may be present.
Lochia may be foul-smelling, odorless (as in beta-hemolytic streptococci infection), scant, or profuse.

Social Interaction

Low socioeconomic status with corresponding stressors (including homelessness)

Teaching/Learning

Lack of prenatal care/postpartum follow-up
Chronic conditions; e.g., malnutrition, anemia, diabetes

DIAGNOSTIC STUDIES

White Blood Cell Count (WBC): Normal or elevated with differential shifted to the left.

Erythrocyte Sedimentation Rate (ESR), and Red Blood Cell (RBC) Count: Markedly increased in presence of infection.

Hemoglobin/Hematocrit (Hb/Hct), RBC Count: Decreased in presence of anemia.

Cultures (Aerobic/Anaerobic) of Intrauterine or Intracervical Material or Wound Drainage, or Gram's Stain of Lochia, Cervix, and Uterus: Identify causative organism(s).

Urinalysis and Culture: Rule out UTI.

Ultrasonography: Determines presence of retained placental fragments; locates peritoneal abscess.

Bimanual Examination: Determines nature and location of pelvic pain, mass or abscess formation, or presence of thrombosed veins.

NURSING PRIORITIES

1. Control spread of infection.
2. Promote healing.
3. Support ongoing process of family acquaintance.

DISCHARGE GOALS

1. Infection resolving
2. Involution progressing, sense of well-being expressed

3. Attachment/bonding demonstrated and care of infant resumed

NURSING DIAGNOSIS:

INFECTION, risk for spread/sepsis

Risk Factors May Include:

Presence of infection, broken skin and/or traumatized tissues, high vascularity of involved area, invasive procedures and/or increased environmental exposure, chronic disease (e.g., diabetes), anemia, malnutrition, immunosuppression and/or untoward effect of medication (e.g., opportunistic/secondary infections)

Possibly Evidenced By:

[Not applicable: presence of signs/symptoms established an *actual* diagnosis]

DESIRED OUTCOMES/EVALUATION CRITERIA—CLIENT WILL:

Verbalize understanding of individual causative risk factors.

Initiate behaviors to limit spread of infection, as appropriate, and reduce risk of complications.

Achieve timely healing, free of additional complications.

ACTIONS/INTERVENTIONS

RATIONALE

Independent

Review prenatal, intrapartal, and postpartal record.

Identifies factors that place client in high-risk category for development/spread of postpartal infection.

Demonstrate and maintain strict hand-washing policy for staff, client, and visitors.

Helps prevent cross-contamination.

Provide for, and instruct client in, proper disposal of contaminated linens, dressings, chux, and peripads. Initiate/maintain isolation, if indicated.

Prevents spread of infection.

Demonstrate/encourage correct perineal cleaning after voiding and defecation, and frequent changing of peripads.

Cleaning removes urinary/fecal contaminants. Changing pad removes moist medium that favors bacterial growth.

Demonstrate proper fundal massage. Review importance and timing of procedure.

Enhances uterine contractility; promotes involution and passage of any retained placental fragments.

Monitor temperature, pulse, and respirations. Note presence of chills or reports of anorexia or malaise.

Elevations in vital signs accompany infection; fluctuations, or changes in symptoms, suggest alterations in client status. Note: Persistent fever unresponsive to antibiotic therapy may indicate pelvic thrombophlebitis.

Observe perineum/incision for other signs of infection (e.g., redness, edema, ecchymosis, discharge and approximation [REEDA scale]). Note subinvolution of uterus, extreme uterine tenderness.

Allows early identification and treatment; promotes resolution of infection. Note: Although localized infections are usually not severe, occasional progression to necrotizing fasciitis can be life-threatening.

Monitor oral/parenteral intake, stressing the need for at least 2000 ml fluid per day. Note urine output, degree of hydration, and presence of nausea, vomiting, or diarrhea.

Encourage semi-Fowler's position.

Promote early ambulation, balanced with adequate rest. Advance activity as appropriate.

Investigate reports of leg or chest pain. Note pallor, swelling, or stiffness of lower extremity. (Refer to CP: Postpartal Thrombophlebitis.)

Recommend that breastfeeding mother periodically check infant's mouth for presence of white patches.

Encourage client/couple to prioritize postdischarge responsibilities (e.g., homemaking tasks, child care).

Instruct in proper medication use (e.g., take entire course of antibiotic, as prescribed).

Discuss importance of pelvic rest as appropriate (avoidance of douching, tampons, and intercourse).

Collaborative

Encourage application of moist heat in the form of sitz baths and of dry heat in the form of perineal lights for 15 min 2–4 times daily.

Demonstrate perineal application of antibiotic creams, as appropriate.

Monitor laboratory studies, as indicated:

Culture(s)/sensitivity;

CBC, WBC count, differential, and ESR;

Partial thromboplastin time/prothrombin time (PTT/PT), clotting times;

Renal/hepatic function studies.

Administer medications as indicated:

Antibiotics, initially broad-spectrum, then organism-specific, as indicated by results of cultures/sensitivity;

Increased intake replaces losses and enhances circulating volume, preventing dehydration and aiding in fever reduction.

Enhances flow of lochia and uterine/pelvic drainage.

Increases circulation; promotes clearing of respiratory secretions and lochial drainage; enhances healing and general well-being. Note: Presence of pelvic/femoral thrombophlebitis may require strict bedrest.

These signs and symptoms are suggestive of septic thrombus formation. Note: Embolic sequelae, especially pulmonary embolism, may be initial indicator of thrombophlebitis.

Oral thrush in the newborn is a common side effect of maternal antibiotic therapy.

Client will require additional rest to facilitate recuperation/healing. Household duties need to be reassigned or delayed as appropriate.

Oral antibiotics may be continued after discharge. Failure to complete medication may lead to relapse.

Promotes healing and reduces risk of reinfection.

Water promotes cleansing. Heat dilates perineal blood vessels, increasing localized blood flow and promotes healing.

Eradicates local infectious organisms, reducing risk of spreading infection.

Identifies infectious process/causative organism and appropriate antimicrobial agents.

Aids in tracking resolution of infectious or inflammatory process. Identifies degree of blood loss and determines presence of anemia.

Helps in identifying alterations in clotting associated with development of emboli. Aids in determining effectiveness of anticoagulation therapy.

Hepatic insufficiency and decreased renal function may develop, altering drug half-life and increasing risks of toxicity.

Combats pathogenic organisms, helping prevent infection from spreading to surrounding tissues and bloodstream. Note: Parenteral route is

Oxytocics, such as pitocin and methylergonovine maleate (Methergine);	preferred for parametritis, peritonitis, and, on occasion, endometritis. Promotes myometrial contractility to retard the spread of bacteria through the uterine walls, and aids in the expulsion of clots and retained placental fragments.
Anticoagulants (e.g., heparin).	In presence of pelvic thrombophlebitis, anticoagulants prevent or reduce additional thrombi formation and limit spread of septic emboli.
Assist with procedures, such as incision and drainage (I&D) or D & C, as necessary.	Draining the infected area, and possible insertion of iodoform gauze packing, promotes healing and reduces risk of rupture into peritoneal cavity. D & C may be needed to remove retained products of conception and/or placental fragments.
Administer whole blood/packed RBCs, if needed.	Replaces blood losses and increases oxygen-carrying capacity in presence of severe anemia/hemorrhage.
Provide supplemental oxygen when necessary.	Promotes healing and tissue regeneration, especially in presence of anemia; may enhance oxygenation when pulmonary emboli are present.
Arrange for transfer to intensive care setting as appropriate.	May be necessary for client with severe infection (e.g., peritonitis, sepsis) or pulmonary emboli to provide appropriate care leading to optimal recovery.

NURSING DIAGNOSIS:

May Be Related To:

Possibly Evidenced By:

DESIRED OUTCOMES/EVALUATION CRITERIA—CLIENT WILL:

NUTRITION: altered, less than body requirements

Intake insufficient to meet metabolic demands (anorexia, nausea/vomiting, medical restrictions)

Aversion to eating, decreased oral intake or lack of oral intake, unanticipated weight loss

Meet nutritional needs, as evidenced by timely wound healing, appropriate energy level, and Hb/Hct within normal postpartal expectations.

ACTIONS/INTERVENTIONS

RATIONALE

Independent

Encourage choice of foods high in protein, iron, and vitamin C when oral intake permitted.

Protein helps promote healing and regeneration of new tissue. Iron is necessary for Hb synthesis. Vitamin C facilitates iron absorption and is necessary for cell wall synthesis.

Promote intake of at least 2000 ml/day of juices, soups, and other nutritious fluids.

Encourage adequate sleep/rest.

Collaborative

Administer parenteral fluids/nutrition, as indicated.

Administer iron preparations and/or vitamins, as indicated.

Assist with placement of nasogastric (NG) or Miller-Abbott tube.

Provides calories and other nutrients to meet metabolic needs and replaces fluid losses, thereby increasing circulating fluid volume.

Reduces metabolic rate, allowing nutrients and oxygen to be used for healing process.

May be necessary to combat dehydration, replace fluid losses, and provide necessary nutrients when oral intake is limited/restricted.

Useful in correcting anemia or deficiencies when present.

May be necessary for gastrointestinal decompression in presence of abdominal distension or peritonitis.

NURSING DIAGNOSIS:

May Be Related To:

Possibly Evidenced By:

DESIRED OUTCOMES/EVALUATION CRITERIA—CLIENT WILL:

PAIN [acute]

Body response to infective agent, properties of infection (e.g., skin/tissue edema, erythema)

Verbalizations, restlessness, guarding behavior, self-focusing, autonomic responses

Identify/use individually appropriate comfort measures.

Report decreased level of pain/discomfort.

ACTIONS/INTERVENTIONS

RATIONALE

Independent

Assess location and nature of discomfort or pain, rate pain on a 0–10 scale.

Provide instruction regarding, and assist with, maintenance of cleanliness and warmth.

Change client's position frequently. Provide comfort measures; e.g., back rubs, linen changes.

Instruct client in relaxation techniques; provide diversionary activities such as radio, television, or reading.

Aids in differential diagnosis of tissue involvement in infectious process.

Promotes sense of general well-being and enhances healing. Alleviates discomfort associated with chills.

Reduces muscle fatigue, promotes relaxation and comfort.

Refocuses client's attention, promotes positive attitude, and enhances comfort.

Encourage continuation of breastfeeding as client's condition permits. Otherwise suggest and provide instruction in use of manual or electric breast pump.

Prevents discomfort of engorgement; promotes adequacy of milk supply in breastfeeding client.

Collaborative

Administer analgesics or antipyretics.

Reduces associated discomforts of infection.

Apply local heat using heat lamp or sitz bath as indicated.

Heat promotes vasodilation, increasing circulation to the affected area and promoting localized comfort.

NURSING DIAGNOSIS:

PARENT/INFANT ATTACHMENT, risk for altered

Risk Factors May Include:

Interruption in bonding process, physical illness, perceived threat to own survival

Possibly Evidenced By:

[Not applicable; presence of signs/symptoms establishes an *actual* diagnosis]

DESIRED OUTCOMES/EVALUATION

Exhibit ongoing attachment behaviors during

CRITERIA—CLIENT WILL:

parent-infant interactions.

Maintain/assume responsibility for physical and emotional care of the newborn, as able.

Express comfort with parenting role.

ACTIONS/INTERVENTIONS

RATIONALE

Independent

Provide opportunities for maternal-infant contact whenever possible. Place pictures of infant at client's bedside (especially if nature of infection/client's condition or hospital policy requires separation of infant from mother during febrile period).

Facilitates attachment, prevents client from engaging in self-preoccupation to the exclusion of the infant.

Monitor client's emotional responses to illness and separation from infant, such as depression and anger. Encourage client to verbalize feelings and reinforce normalcy as appropriate.

Normal expectations are of an uncomplicated postpartal period with the family unit intact. Illness due to infection alters the situation and may result in separation of client from family or newborn, which can contribute to feelings of isolation and depression.

Encourage client to feed infant if possible and to increase her participation in infant care as the infection resolves/client is able.

Success in accomplishing infant care tasks enhances client's outlook and promotes her attachment with infant. Note: Dependent on type of infection, bottle-fed infants may need to be separated from mother for longer period because they do not receive protective advantages of breastfeeding.

Observe maternal-infant interactions.

Encourage father/other family members to care for and interact with the infant.

Discuss availability/effectiveness of support systems in home setting.

Collaborative

Make arrangements for appropriate follow-up evaluation of mother-infant interactions/responses through home visit.

Identify individual support systems. Refer to visiting nurse services, home care agencies, as indicated.

Provides information regarding status of bonding process and client needs.

May be encouraging to mother to know that family is caring for the infant and providing emotional support. Note: Unexpected/prolonged hospital stay may reduce father's ability to spend time with newborn because of other responsibilities, including care of siblings. Father may require additional support during this stressful time.

Client requires additional support to accomplish homemaker tasks, allowing client to obtain adequate rest and spend time with infant/other children.

Provides resources and support to client; useful in identifying specific needs and facilitates problem-solving.

Client may require assistance with home maintenance and activities of daily living while following discharge instructions for rest and recuperation.