

POSTPARTAL THROMBOPHLEBITIS

Superficial thrombophlebitis is seen more often during the postpartal period than during pregnancy and is more common in women with preexisting varices. Postpartal deep vein thrombosis (DVT) and superficial thrombophlebitis have been attributed to trauma to pelvic veins from pressure of the presenting fetal part, sluggish circulation caused by mechanical edema, and alterations in coagulation related to the large amounts of estrogens produced during pregnancy. Thrombosis that involves only the superficial veins of the leg or thigh is unlikely to generate pulmonary emboli (PE). While approximately 50% of clients with DVT are asymptomatic, DVT is more serious in terms of potential complications, including PE, postphlebotic syndrome, chronic venous insufficiency, and vein valve destruction.

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

CLIENT ASSESSMENT DATA BASE

Activity/Rest

History of prolonged sitting, either work-related or as a result of activity restrictions
Current immobility associated with bedrest and anesthesia
Activity/prolonged standing limited by pain
Fatigue/weakness of affected extremity, general malaise

Circulation

Varicose veins; thrombosis may be palpable, bumpy/knotty.
Slight elevation of pulse rate (superficial).
History of previous venous thrombosis, heart disease, hemorrhage, PIH, diabetes mellitus, hypercoagulability in early puerperium.
Peripheral pulses diminished, positive Homans' sign may or may not be noted (indicators of DVT).
Lower extremity (calf/thigh) may be warm and pinkish-red in color, or affected limb may be cool, pale, edematous.

Food/Fluid

Excessive weight gain/obesity.
Poor skin turgor, dry mucous membranes (dehydration predisposes to hypercoagulability).
Milk supply may occasionally be reduced in lactating client.
Edema of affected extremity (dependent on location of thrombus).

Pain/Discomfort

Throbbing, tenderness, aching pain in affected area (e.g., calf or thigh) aggravated by standing or movement
Lower abdominal pain (involvement of ovarian vein)
Guarding of affected extremity

Safety

Presence of postpartal endometritis or pelvic cellulitis.
Temperature may be slightly elevated; progression to marked elevation and chills (signs of DVT); high fever (septic pelvic thrombophlebitis).

Sexuality

Multiparity; hydramnios
Prolonged labor associated with fetal head pressure on pelvic veins, use of stirrups or faulty positioning of extremities during intrapartal phase/operative delivery

Teaching/Learning

Use of oral contraceptives
Use of estrogen for suppression of lactation

DIAGNOSTIC STUDIES

Hematocrit (Hct): Identify hemoconcentration.

Coagulation Studies: Reveals hypercoagulability.

Noninvasive Vascular Studies (Doppler Oscillometry, Exercise Tolerance, Impedance Plethysmography, and Real-Time [Duplex] Ultrasonography): Changes in blood flow and volume identify venous occlusion, vascular damage, and vascular insufficiency. Ultrasonography appears to be most accurate noninvasive method for diagnosing multiple proximal DVT (iliac, popliteal) but is less reliable in detecting isolated calf vein thrombi.

Trendelenburg Test: May demonstrate vessel valve incompetence.

Contrast Venography: Confirms diagnosis of DVT through changes in blood flow and/or size of channels.

NURSING PRIORITIES

1. Maintain/enhance tissue perfusion, facilitate resolution of thrombus.
2. Promote optimal comfort.
3. Prevent complications.
4. Provide information and emotional support.

DISCHARGE GOALS

1. Tissue perfusion improved in affected limb/area
2. Pain/discomfort relieved
3. Complications prevented/resolved
4. Disease process/prognosis and therapeutic needs understood
5. Plan in place to meet needs after discharge

NURSING DIAGNOSIS:

May Be Related To:

Possibly Evidenced By:

**DESIRED OUTCOMES/EVALUATION
CRITERIA—CLIENT WILL:**

TISSUE PERFUSION, altered peripheral

Interruption of venous flow

Edema of affected extremity; erythema (superficial thrombophlebitis) or pallor and coolness (DVT), diminished peripheral pulses, pain

Demonstrate improved circulation of involved extremity with palpable peripheral pulses of good quality, timely capillary refill, and decreased edema and erythema.

Engage in behaviors/activities to enhance tissue perfusion.

Display increasing tolerance to activity.

ACTIONS/INTERVENTIONS

RATIONALE

Independent

Encourage bedrest with elevation of feet and lower legs 6 in above heart level during acute phase.

Minimizes the possibility of dislodging thrombus and creating emboli. Rapidly empties superficial and tibial veins and keeps veins collapsed, thereby increasing venous return. Note: Caution is required in presence of leg ischemia.

Evaluate neurological function of extremity (both sensory and motor). Observe extremity for color; inspect from groin to foot for edema. Note asymmetry; measure and record calf/thigh circumference of both legs as appropriate. Report proximal progression of inflammation, traveling pain.

Assess capillary refill, and check for Homans' sign.

Instruct client to elevate legs when in bed or chair, as indicated. Periodically elevate feet and legs above heart level.

Caution client not to cross legs or wear constrictive clothing.

Instruct client to avoid rubbing and massaging the affected extremity.

Initiate active or passive exercises while in bed (e.g., flex/extend/rotate foot periodically). Assist with gradual resumption of ambulation (e.g., walking 10 min/h) as soon as client is permitted out of bed.

Encourage deep-breathing exercises.

Observe respiratory ease and auscultate lung sounds, noting crackles or friction rub. Investigate reports of chest pain or feelings of anxiety.

Recommend increased fluid intake to 2000+ ml/day.

Collaborative

Apply warm, moist compresses or heat cradle to affected extremity as indicated.

Administer medication, e.g.:

Heparin (via continuous IV drip, intermittent administration using heparin lock, or subcutaneous administration) or coumarin derivatives;

Symptoms help distinguish between superficial thrombophlebitis and DVT. Redness, heat, tenderness, and localized edema are characteristic of superficial involvement. Pallor and coolness of extremity are more characteristic of DVT. Calf vein involvement of DVT is usually associated with absence of edema; mild to moderate edema suggests femoral vein involvement, and severe edema is characteristic of iliofemoral vein thrombosis.

Diminished capillary refill usually present in DVT. Positive Homans' sign (deep calf pain in affected leg upon dorsiflexion of foot) is not as consistent a clinical manifestation as once thought and may or may not be present.

Reduces tissue swelling and rapidly empties superficial and tibial veins, preventing overdistension and, thereby, increasing venous return. Note: Some physicians believe that elevation may potentiate release of thrombus, thus increasing risk of embolization and decreasing circulation to the most distal portion of the extremity.

Physical restriction of circulation impairs blood flow, thus increasing venous stasis, pain, and trauma.

Prevents fragmentation/dislodging thrombus, which could lead to embolism.

These measures are designed to increase venous return from lower extremities and reduce venous stasis, as well as improve general muscle tone/strength. They also promote normal organ function and enhance general well-being.

Produces increased negative pressure in thorax, which assists in emptying large veins.

Pulmonary congestion, sharp substernal chest pain, sudden apprehension, dyspnea, tachypnea, and hemoptysis are indicative of pulmonary emboli, especially in DVT. Note: Client may remain symptom-free and undiagnosed until emboli develop.

Dehydration increases blood viscosity and venous stasis, predisposing to thrombus formation.

Increases circulation to area; promotes vasodilation, venous return, and resolution of edema.

Heparin is usually preferred initially, owing to its prompt and predictable antagonistic action toward thrombin formation and prevention of further clot formation. Because of its large molecular size, heparin does not pass through to breast milk as coumarin derivatives do; however, coumarin,

Thrombolytic agents (streptokinase, urokinase);	which blocks formation of prothrombin from vitamin K, may be used for long-term therapy following discharge.
Antibiotic agents.	May be used for treatment of acute (less than 5 days old) or massive DVT to prevent valvular damage and development of chronic venous insufficiency. Heparin is usually begun several hours after the completion of thrombolytic therapy.
Apply/regulate graduated compression stockings, intermittent pneumatic compression, if used.	Infections of reproductive tract may lead to septic pelvic thrombophlebitis.
Assist with/monitor application of elastic support hose. Stress need for care to avoid any tourniquet effect.	Sequential compression devices may be used to improve blood flow velocity and emptying of vessels by providing artificial muscle-pumping action.
Monitor laboratory studies, e.g.:	Following acute phase, useful in superficial thrombosis because they exert a sustained, evenly distributed pressure over the entire surface of calves and thighs, reducing caliber of superficial veins, increasing blood flow to deep veins, and reducing stasis.
PT, PTT/APTT; Hb/Hct;	Monitors effectiveness of anticoagulant therapy. Hemoconcentration and dehydration can potentiate clot formation.
Aspartate aminotransferase (AST), lactate dehydrogenase (LDH).	Elevated levels may indicate emboli.
Prepare for surgical intervention when indicated.	Thrombectomy (excision of thrombus) is occasionally necessary if inflammation extends proximally or circulation is severely restricted. Multiple/recurrent thrombotic episodes unresponsive to medical treatment (or when anticoagulant therapy is contraindicated) may require insertion of a vena caval screen/umbrella).

NURSING DIAGNOSIS:

May Be Related To:

Possibly Evidenced By:

**DESIRED OUTCOMES/EVALUATION
CRITERIA—CLIENT WILL:**

PAIN [acute]/[DISCOMFORT]

Presence of inflammatory process, vascular spasms, accumulation of lactic acid

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

Participate in behaviors/techniques to promote comfort.

Report pain is relieved/controlled.

Appear relaxed and sleep/rest appropriately.

ACTIONS/INTERVENTIONS

RATIONALE

Independent

Assess characteristics, and degree of discomfort or pain using 0–10 scale; palpate leg with caution. Note guarding of extremity.

Degree of pain is directly related to extent of arterial involvement, degree of hypoxia, and extent of edema associated with thrombus development in inflamed venous wall. Client may guard or immobilize affected extremity to decrease painful sensations associated with muscle movement. Changes in characteristics of pain may indicate progression of problem/development of complications.

Maintain bedrest during acute phase.

Reduces discomfort associated with muscle contraction and movement. Minimizes possibility of dislodging thrombus.

Monitor vital signs, noting elevated temperature or pulse.

Elevation of vital signs may indicate increasing pain, or occur in response to fever and inflammatory process. Fever may contribute to general discomfort.

Elevate affected extremity; provide foot cradle.

Encourages venous return, facilitates circulation. Foot cradle keeps pressure of bedclothes off the affected leg, thereby reducing pressure discomfort.

Encourage change of position, keeping extremity elevated.

Decreases or prevents fatigue, helps minimize muscle spasm, and increases venous return.

Explain procedures, treatments, and nursing interventions.

Involving the client in the nursing care increases her sense of control and decreases her level of anxiety. Note: Anxiety/fear can result in muscle tension and increased perceptions of pain.

Investigate reports of sudden and/or sharp chest pain, dyspnea, tachycardia, or apprehension.

These signs and symptoms suggest PE as a complication of DVT.

Collaborative

Administer medications as indicated:

Analgesics (narcotic/nonnarcotic).
Antipyretics, anti-inflammatory agents (e.g., acetaminophen, phenylbutazone).

Relieves pain and decreases muscle tension, promoting relaxation/rest. Reduces fever and inflammation. Note: Risk of bleeding may be increased by concurrent use of drugs that affect platelet function, e.g., acetylsalicylic acid (ASA) and nonsteroidal anti-inflammatory drugs (NSAIDs).

Apply moist heat to extremity.

Causes vasodilation, which increases circulation, relaxes muscles, and may stimulate release of endorphins.

NURSING DIAGNOSIS:

ANXIETY [specify level]

May Be Related To:

Change in health status, perceived or actual threat to self, situational crisis, interpersonal transmission of anxiety from family members

Possibly Evidenced By:

Increased tension, apprehension, restlessness, sympathetic stimulation

DESIRED OUTCOMES/EVALUATION

Verbalize awareness of feelings of anxiety.

CRITERIA—CLIENT WILL:

Report anxiety reduced to a manageable level.

Exhibit a decrease in behavioral signs, such as restlessness and irritability.

ACTIONS/INTERVENTIONS

RATIONALE

Independent

Explain procedures, treatments, and nursing interventions.

Reduces fear of the unknown; promotes client's learning and involvement in treatment.

Demonstrate/encourage use of relaxation techniques. Provide opportunity to verbalize concerns.

Energy-release techniques and verbalization of concerns reduce emotional tension, lessening anxiety. Relaxation prevents muscle fatigue and allows client to rest.

Monitor vital signs and behavioral signs such as restlessness, irritability, and crying.

May reflect change in level of anxiety; may indicate decreasing ability to cope with events.

Assist client in caring for herself and infant.

Client's anxiety may lessen when she finds that her needs are met and that she is able to cope and engage in self-care and infant care tasks.

Involve client/significant other(s) in development of plan of care; review instructions and restrictions.

Provides information and helps the client and significant other understand the need for interventions and restrictions; provides them with a sense of control over the situation.

Encourage frequent contact, in person or by telephone, with spouse and children if client is hospitalized. Encourage regular contact/ "rooming in" with newborn as condition allows.

Helps to reduce feelings of separation and isolation. Facilitates transition to home.

Determine anticipated availability/effectiveness of supports following discharge. Prioritize responsibilities/household tasks.

Helps identify specific needs, encourages problem solving to meet needs of client/family before client is discharged.

Collaborative

Refer to social services, visiting nurse, homecare agency, as appropriate.

May require additional support to facilitate recovery/meet needs of family.

NURSING DIAGNOSIS:

KNOWLEDGE deficit [Learning Need], regarding condition, treatment needs, and prognosis

May Be Related To:

Lack of exposure/recall, misinterpretation

Possibly Evidenced By:

Verbalizations, inaccurate follow-through of instructions, development of preventable complications

DESIRED OUTCOMES/EVALUATION CRITERIA—CLIENT WILL:

Verbalize understanding of condition, treatment, and restrictions.

Initiate necessary behavioral changes/correctly perform therapeutic procedures.

Identify signs/symptoms requiring medical evaluation.

ACTIONS/INTERVENTIONS

RATIONALE

Independent

Assess client’s knowledge and understanding of disease process. Correct misconceptions as needed

Helps in determining specific needs and clarifying previous information.

Provide information about management and diagnostic tests. Identify signs and symptoms requiring notification of healthcare provider; e.g., coolness or pallor of extremity, tenderness in affected area, or edema.

Can increase understanding and decrease anxiety associated with condition and home management. Progression of condition and/or development of bleeding requires prompt evaluation and possible changes in therapy to prevent serious complications. Note: Up to 33% will experience a recurrence of DVT.

Explain purpose of bedrest/activity restrictions need for adequate rest.

Rest reduces oxygen and nutrient needs of compromised tissues and decreases risk of fragmentation of thrombosis. Balancing rest with activity prevents exhaustion and further impairment of cellular perfusion.

Demonstrate application of antiembolic stocking, if worn. Encourage removal of elastic stockings for brief intervals at least twice daily.

Continuous constriction may alter or reduce surface perfusion, leading to muscle fatigue. Removal of elastic stockings allows for detection of further vascular involvement or inflammation.

Discuss purpose, dosage of anticoagulant. Emphasize importance of taking drug as prescribed.

Promotes client safety by reducing risk of inadequate therapeutic response/deleterious side effects.

Identify possible interactions between oral anticoagulant therapy and other medications (e.g., salicylates, vitamins, antibiotics, barbiturates, and alcohol). Stress need to read ingredient labels of over-the-counter (OTC) drugs.

Oral anticoagulant therapy may last 3–4 mo and may cause problems or require alterations in drug dosage if it is allowed to interact with other medications. Salicylates and excess alcohol decrease prothrombin activity; vitamin K in multivitamins increases prothrombin activity; antibiotics alter intestinal flora and may interfere with vitamin K synthesis; barbiturates increase metabolism of coumarin drugs.

Recommend safety measures to avoid trauma, such as use of a soft toothbrush, electric razors for shaving, walking barefoot.

Alterations in coagulation process may result in increased tendency to bleed, which may indicate a need to alter anticoagulant therapy.

Identify untoward anticoagulant effects requiring medical attention, e.g., bleeding from mucous membranes (nose, gums), continued oozing from cuts/punctures, severe bruising after minimal trauma, development of petechiae.

Stress importance of medical follow-up/
laboratory testing.

Early detection of deleterious effects of therapy (prolongation of clotting time) allows for timely interventions and may prevent serious complications.

Understanding that close supervision of anticoagulant/therapy is necessary (therapeutic dosage range is narrow and complications may be deadly) promotes client participation/adherence to therapeutic regimen.