



Michigan Quality Improvement Consortium Guideline

Outpatient Management of Uncomplicated Deep Venous Thrombosis

The following guideline applies to patients diagnosed with acute deep vein thrombosis without pulmonary embolism, or other contraindications to outpatient management.

Eligible Population	Key Components	Recommendation and Level of Evidence				
<p>Adult patients \geq 18 years of age</p> <p>Diagnosis of acute DVT, confirmed by duplex ultrasonography or venography. [A]</p> <p>No contraindications to anticoagulation or use of low molecular weight heparin (LMWH).</p>	Initial assessment	<ul style="list-style-type: none"> Perform initial comprehensive history and physical examination; consider conditions predisposing to DVT. Assess risk factors and contraindications to outpatient anticoagulation therapy. <p>Relative contraindications to outpatient therapy:</p> <table border="0"> <tr> <td> <ul style="list-style-type: none"> Pulmonary embolism Extensive ileo-femoral thrombus Known potential for non-compliance Use caution if recent surgery/trauma </td> <td> <ul style="list-style-type: none"> Active bleeding Multiple DVTs Severe HTN Pregnancy </td> <td> <ul style="list-style-type: none"> Known hypercoagulable state Catheter-associated DVT Renal clearance <30 mL/min Childbearing age w/o contraception </td> <td> <ul style="list-style-type: none"> Thrombocytopenia $<100,000$ History of heparin induced thrombocytopenia Creatinine >2.5 mg/dl </td> </tr> </table> <p>Relative contraindications to warfarin: pregnancy, dementia, and certain psychoses.</p> <ul style="list-style-type: none"> Assess patient/caregiver ability and compliance for outpatient therapy, and need for home care resources. 	<ul style="list-style-type: none"> Pulmonary embolism Extensive ileo-femoral thrombus Known potential for non-compliance Use caution if recent surgery/trauma 	<ul style="list-style-type: none"> Active bleeding Multiple DVTs Severe HTN Pregnancy 	<ul style="list-style-type: none"> Known hypercoagulable state Catheter-associated DVT Renal clearance <30 mL/min Childbearing age w/o contraception 	<ul style="list-style-type: none"> Thrombocytopenia $<100,000$ History of heparin induced thrombocytopenia Creatinine >2.5 mg/dl
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	Pharmacologic interventions	<ul style="list-style-type: none"> Start LMWH and warfarin on same day Enoxaparin Therapy (LMWH) 1mg/kg SQ every 12 hours or 1.5mg/kg SQ once daily. [A] Initiate concurrent warfarin therapy [A] at 5mg orally on day of DVT diagnosis, titrate to INR range of 2.0 - 3.0. Continue LMWH until INR range 2.0 - 3.0 for 2 consecutive days (usually LMWH 5 - 7 days). [A] Maintain warfarin therapy at least 3 months in therapeutic INR range. [A] Consider long-term therapy with warfarin if risk of reoccurrence. [A] Ask about any changes in diet, medications and compliance before any dosage adjustment. Re-evaluate need for warfarin at 3 months. 				
	Testing/Monitoring	<ul style="list-style-type: none"> Obtain baseline lab values: aPTT, PT/INR, CBC with platelet count. Obtain platelet count 3 to 5 days into anticoagulation therapy. Monitor warfarin therapy using INR; no lab monitoring required for Enoxaparin unless special circumstances such as renal insufficiency exist. INR daily until stabilized in therapeutic range; then at least 2-3 times per week for the next 1-2 weeks. When stable, monitor every 4-8 weeks. Maintain an Anticoagulant Monitoring Log (or dose adjustment system) for each patient treated with warfarin. Monitor common bleeding sites; gums, nose, GI, GU and skin. Monitor for signs/symptoms of pulmonary embolism, risk factors and side effects. Management through a specialized program for anticoagulation monitoring, if available. 				
Patient education	<ul style="list-style-type: none"> Inform patient/caregiver of the reasons and benefits of therapy, potential side effects, importance of follow-up monitoring, warfarin dosage adjustment, compliance, dietary recommendations (i.e. a diet that is constant in vitamin K - spinach, greens, broccoli), the potential for drug interactions, safety precautions, and recognizing internal bleeding. Instruct patient/caregiver on symptoms of pulmonary embolism and extension of DVT. The patient should be encouraged to be ambulatory after an appropriate weight-based dose of LMWH, or after the patient has achieved a therapeutic aPTT with standard heparin. [D] Bed rest is only advised when the patient has an unstable DVT by duplex, or severe iliofemoral DVT with massive entire leg swelling. Instruct patient/caregiver on self-injection of Enoxaparin. 					

Levels of Evidence for the most significant recommendations: A = randomized controlled trials; B = controlled trials, no randomization; C = observational studies; D = opinion of expert panel

This guideline represents core management steps. It is based on several sources, including: Sixth ACCP Consensus Conference on Antithrombotic Therapy, American College of Chest Physicians, 2001 (www.chestnet.org). Individual patient considerations and advances in medical science may supersede or modify these recommendations.