



Michigan Quality Improvement Consortium Guideline

Outpatient Management of Uncomplicated Deep Venous Thrombosis

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>Initial assessment</p>	<ul style="list-style-type: none"> ◆ Perform initial comprehensive history and physical examination; consider conditions predisposing to DVT. ◆ Assess patient/caregiver ability and compliance for outpatient therapy, and need for home care resources. ◆ Assess for relative or absolute contraindications to outpatient anticoagulation therapy, including: <ul style="list-style-type: none"> ◆ Pulmonary embolism ◆ Severe HTN ◆ Thrombocytopenia <100,000 ◆ Extensive iliofemoral thrombus ◆ Catheter-associated DVT ◆ History of heparin induced thrombocytopenia ◆ Known potential for non-compliance ◆ Renal clearance <30 mL/min or creatinine >2.5 mg/dL ◆ Active bleeding
<p>No contra-indications to anticoagulation or use of low molecular weight heparin (LMWH).</p>	<p>Initiating and monitoring pharmacologic interventions</p>	<ul style="list-style-type: none"> ◆ Outpatient therapy is preferred if no contraindications. ◆ Contraindications to warfarin therapy: <ul style="list-style-type: none"> Absolute: pregnancy Relative: dementia, certain psychoses, diminished mental capacity, or childbearing age without contraception ◆ Begin LMWH. ◆ Begin warfarin after 1st dose of LMWH [A], on the same day, titrate to INR range of 2.0 - 3.0. ◆ Continue LMWH (along with warfarin) at least 5 days, and until INR range 2.0 - 3.0 for 2 consecutive days. [A] ◆ Maintain warfarin therapy at least 3 months in therapeutic INR range [A], longer if risk of recurrence. ◆ Ask about any changes in diet, medications, supplements and herbal products, and compliance before any dosage adjustment. ◆ If known hypercoagulable state, consider referral to a coagulation specialist.
	<p>Testing/Monitoring</p>	<ul style="list-style-type: none"> ◆ Obtain baseline lab values: aPTT, PT/INR, CBC with platelet count. Consider platelet count 3 to 5 days into anticoagulation therapy. ◆ Monitor warfarin therapy using INR; no lab monitoring required for LMWH unless special circumstances such as renal insufficiency or extremes of body weight. ◆ Frequent INR monitoring is necessary at the onset of warfarin therapy (e.g. at least 2 checks in the first week of therapy); then at least 2-3 times per week for the next 1-2 weeks. When stable, monitor every 4-8 weeks. ◆ Monitor common bleeding sites; gums, nose, GI, GU and skin. ◆ Monitor for signs/symptoms of pulmonary embolism, and medication side effects. ◆ Maintain an Anticoagulant Monitoring Log (or dose adjustment system) for each patient treated with warfarin. ◆ Management through a systematic program is essential (either in office or a specialized program for anticoagulation monitoring).
	<p>Patient education</p>	<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), the potential for drug interactions, safety precautions, recognizing internal bleeding, and risk of hormonal contraception/therapies. ◆ Instruct patient/caregiver on symptoms of pulmonary embolism, extension of DVT and self-injection of LMWH. ◆ The patient should be encouraged to be ambulatory after an appropriate weight-based dose of LMWH [D]. ◆ Compression stockings should be used routinely to prevent post-thrombotic syndrome [A], beginning as soon as possible of the diagnosis of DVT and continuing for a minimum of 2 years. If stockings cannot be used initially due to swelling, compression wraps should be used until it is possible to use stockings.

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: Management of Venous Thromboembolism: A Clinical Practice Guideline from the American College of Physicians and the American Academy of Family Physicians. *Ann Intern Med.* 2007;146:204-10; and, New Antithrombotic Drugs. American College of Chest Physicians. *CHEST* 2008;133:234S-256S. Individual patient considerations and advances in medical science may supersede or modify these recommendations.

