MQIC

Michigan Quality Improvement Consortium Guideline

January 2024

Outpatient Management of Acute Uncomplicated Deep Venous Thrombosis

This guideline recommends **outpatient** management of uncomplicated lower extremity DVT in non-pregnant adults ≥ 18 years of age.

Key Components	Recommendation
Definitions	Acute DVT: new thrombosis in lower extremity deep veins (iliac, common femoral, femoral, deep femoral, popliteal, anterior/posterior tibial, peroneal, gastrocnemial). Uncomplicated DVT implies an absence of iliofemoral thrombosis, extensive thrombosis (i.e., entire extremity or bilateral above-knee DVT), pulmonary embolus, hemodynamic instability, pregnancy, active cancer (receiving cancer treatment within the past six months or current palliative treatment).
Initial Assessment	History and physical exam alone is inadequate for diagnosis. DVT diagnostic scoring tool, e.g., Wells criteria, with or without D-dimer testing, may be helpful. Diagnosis of acute DVT must be confirmed by duplex ultrasonography or CT venogram. **[A]** If ultrasound negative and clinical suspicion, repeat ultrasound in 1 week. Outpatient anticoagulant therapy is preferred and requires adequate home care resources, patient compliance, confirmed prescription drug coverage, low risk of bleeding, no contraindications to anticoagulation, and direct verbal contact with physician responsible for ongoing management. Assess for absolute contraindications to outpatient management: fresh surgical wound, active GI bleeding, history of intracranial hemorrhage, multiple/major trauma, recent neurosurgery/spine surgery, medication compliance concerns, concurrent symptomatic pulmonary embolism, advanced renal failure, non-ambulatory due to DVT, platelet count <50,000. Low molecular weight heparin (LMWH) is contraindicated if history of heparin-induced thrombocytopenia (HIT). Assess for relative contraindications to outpatient management: severe hypertension (BP systolic > 220 or BP diastolic > 110 mmHg); platelet count 50,000-100,000; GI bleed within past 6 months; CKD Stage IV (estimated GFR [eGFR] < 30 ml/min); morbid obesity (BMI > 40 kg/M^2), medical co-morbidities, recent major surgery or eye surgery (consult with surgeon).
Initiating Therapy	If anticoagulation contraindicated, refer for IVC filter. Begin anticoagulation therapy as soon as possible with one of these 3 options (proper dosing is required[1]): Direct oral anticoagulants (DOACs) - preferred therapy, but avoid in patients with advanced renal failure and those taking antiplatelet agents, azole antifungals[2],several protease inhibitors[3],and some anticonvulsants.[4] NSAIDs increase risk of bleeding. • Rivaroxaban, apixaban (direct Factor Xa inhibitors): does not require LMWH bridging or lab tests for monitoring; reversal agent (andexanet alfa) available. Apixaban for DVT does not require reduced dosing in patients with renal failure. Do not use rivaroxaban in patients with eGFR < 15 ml/min. • Edoxaban (direct Factor Xa inhibitor): requires concurrent LMWH bridging for initial 5-10 days; lab tests for monitoring unnecessary; no reversal agent. Reduce dose if eGFR 15-30 ml/min; do not use if eGFR < 15 ml/min. • Dabigatran (direct thrombin inhibitor): requires concurrent LMWH bridging for initial 5-10 days; lab tests for monitoring unnecessary, reversal agent (idarucizumab) available. Do not use if eGFR < 30 ml/min. Warfarin with LMWH bridging for 5 days; requires initial and periodic INR monitoring to maintain therapeutic range of 2.0-3.0. **[A]** Anti-clotting action can be reversed with oral or IV vitamin K and plasma clotting factors (prothrombin complex concentrate [PCC] is preferred over fresh frozen plasma). LMWH as monotherapy (recommended in active cancer or pregnancy). In low-risk patients with HIT, use fondaparinux instead. If known hypercoagulable state, consider referral to a coagulation specialist. Duration of therapy is 3 months for acute uncomplicated DVT with a clear precipitating cause ("provoked DVT"). **[A]** Recurrent, unprovoked or other types of DVT may require long-term anticoagulation.
Testing/ Monitoring	Obtain baseline lab studies: CBC with platelet count, PT/INR, aPTT, creatinine/eGFR. Monitor for signs and symptoms of pulmonary embolism and medication side effects. For patients on warfarin: order and check INR on 3rd day after drug initiation and frequently thereafter (usually 2 checks/week in first 3 weeks of therapy). • Monitor INR results through an anticoagulation clinic, or use standardized protocols such as established anticoagulation toolkit[1]. For patients on LMWH: consider platelet count 3-5 days into anticoagulation therapy. Especially in cases of nonprovoked DVT, ensure that all age appropriate screening for malignancies are up to date.
Patient Education[1]	Inform patient/caregiver of benefits and risks of therapy, potential side effects, importance of follow-up monitoring, medication compliance, potential for drug interactions, safety precautions, recognizing internal bleeding, and requirement for contraception. Anticoagulated patients with acute head trauma should be seen immediately at the nearest hospital Emergency Department. For warfarin patients, inform of need for dose adjustment and stable vitamin K in diet. Instruct patient/caregiver on symptoms of pulmonary embolism, extension of DVT and self-injection of LMWH. Early ambulation of anticoagulated DVT patients is safe and should be encouraged. **[A]** Use of compression stockings may minimize symptoms of swelling and discomfort but is controversial. Exercise training may also be helpful. **[B]**

[1]Michigan Anticoagulation Quality Improvement Initiative Anticoagulation Toolkit Version 1.7 (providers and patients); [2]e.g., ketoconazole; [3]e.g., ritonavir; [4]e.g., phenytoin, carbamazepine

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 Antithrombotic Therapy for VTE Disease CHEST Guideline and Expert Panel Report. CHEST 2016; 149(2):315-352. Individual patient considerations and advances in medical science may supersede or modify these recommendations.

Approved by MQIC Medical Directors 2009, 2010, 2011, 2013, 2015, 2017, 2019; September 2021; January 2024