

Outpatient Treatment of Deep Venous Thrombosis (DVT)

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- Outpatient treatment of DVT is now possible due to the reliability of diagnostic tests and the development of low molecular weight heparins (LMWHs).
- Outpatient treatment has been shown to be just as safe and as efficacious as inpatient treatment. In addition, outpatient treatment of acute DVT with LMWH promises enhanced patient satisfaction and reduced cost.
- The goals of DVT treatment are to prevent thrombus extension, thrombus embolism, early and late recurrent thromboembolism, and the post-thrombotic syndrome.
- The foremost concern for most clinicians is failure to prevent a subsequent embolism or recurrent DVT.
- Subcutaneous LMWH has been shown to be at least as effective and as safe as unfractionated heparin (UFH) by 11 randomized clinical trials with follow-up ≥ 3 months.
- LMWH offers several advantages over UFH. There is no need to monitor the activated Partial Thromboplastin Time (aPTT). LMWH is easier to dose and ensure therapeutic levels within the first 24 hours of initiation of treatment.
- There are many causes of cancer-associated thrombosis due to the interaction between tumor cells and platelets, clotting, and fibrinolytic proteins. In addition, aggressive chemotherapy further increases the risk. Evidence supports the preferential use of LMWH in these patients. LMWH appears to have anti-neoplastic effects and may have a survival benefit. Patients with cancer-associated DVT can be safely and effectively treated with LMWH in the outpatient setting.
- Until vitamin K antagonists are fully therapeutic (with an INR range of 2-3), UFH, low molecular weight heparin (LMWH), or the selective binder to anti-thrombin III, Fondaparinux, is used to bridge the gap.
- In patients for whom vitamin K antagonists are contraindicated as in pregnancy, or less effective, as in cancer patients, secondary prophylaxis is accomplished with dose-adjusted LMWH.
- LMWHs have been replacing traditional anticoagulation with UFH due to their more predictable dose response, ease of use, and lower association with the development of heparin induced thrombocytopenia with thrombosis (HITT).
- Despite the evidence supporting the preferential use of LMWH in the outpatient setting, on a practice level there is an implementation gap between the best evidence and practice. Many clinicians feel uncertain as to which patients may

prove eligible for outpatient treatment and who will be responsible for the delivery of care.

- The busy clinician needs to ask:
 1. What are the exclusion criteria mandating an inpatient stay?
 2. What prescreening of the patient, at the time of the initial evaluation of lower extremity symptoms, is required?
 3. What factors might influence you to consider a limited short stay in the hospital despite eligibility for outpatient management?
 4. Prior to discharge, what must be done?
- The criteria for hospitalization include the presence of massive DVT, symptomatic acute pulmonary embolism, high risk of bleeding with full therapeutic anticoagulation, a high suspicion of HITT, or other factors or co-morbid conditions for which hospitalization would be considered anyway. The presence of a free-floating proximal DVT is not an exclusion criteria for outpatient management, and ambulatory therapy has been shown to be safe. Patient compliance with self-administered injections is critical to secondary prevention and should factor into decision-making.
- The optimal duration of treatment after DVT is still unclear. Most clinicians stratify risk on the basis of whether the patient has had a second event, underlying cancer, or known hypercoagulopathy. The assumed etiology – idiopathic or situational such as recent surgery – also influence the duration of treatment.
- Graduated compression hosiery should also be prescribed in the outpatient setting. Leg compression and ambulation is better than bed rest for the acute treatment of DVT and reduces the likelihood of the chronic post-phlebotic syndrome, a major cause of morbidity following DVT in a significant number of patients.

References:

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