

## **VTE PREVENTION FOR MEDICAL PATIENTS**

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While long-haul air travel receives the most attention as a risk factor for venous thromboembolism (VTE), it is really the common problems of internal medicine that cause the most harm: obesity, cigarette smoking, and hypertension. These risk factors are “environmental” and can be controlled or reversed. Other risk factors include advancing age, cancer, and women’s health issues such as contraceptives, pregnancy, and hormone replacement therapy.

Hospitalized patients with medical illnesses such as cancer, pneumonia, chronic lung disease, or heart failure are at especially high risk of developing VTE while hospitalized. Failure to prophylax these patients can be lethal. Omitting prophylaxis occurs much more often among hospitalized medical patients compared with hospitalized surgical patients.

Fortunately, pharmacological prophylaxis has been demonstrated to be effective and safe in medical patients. Options include minidose unfractionated heparin 5,000 units every 8 hours, enoxaparin 40 mg once daily, dalteparin 5,000 units once daily, and fondaparinux 2.5 mg once daily.

While primary prevention is crucial for patients hospitalized with medical illnesses other than VTE, secondary prevention is equally important for patients who have previously suffered VTE. The risk of recurrent VTE after discontinuing anticoagulation is approximately 25-30% over the ensuing 5-10 years. Most of this risk of recurrence is concentrated in the first several years after discontinuing anticoagulation.

The most important predictor of risk of recurrence is whether the initial VTE was provoked by trauma or surgery or was unprovoked. Patients with VTE due to trauma or surgery have a low risk of recurrence after discontinuing a 6-month course of anticoagulation. Women who suffered VTE due to hormonal contraception, pregnancy, or postmenopausal hormone replacement have a low risk of recurrence as long as the etiologic trigger is avoided. In contrast, patients with unprovoked VTE have high risk of recurrence after anticoagulation is discontinued. Surprisingly, the presence of thrombophilia such as Factor V

Leiden or prothrombin gene mutation is not a major contributor to the risk of recurrent VTE.

In summary, primary prevention is underutilized, especially in medically ill patients. In the absence of a provoked VTE, the risk of recurrence is high. In this setting, long-term anticoagulation should be considered.

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