

# Practice Tips

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## Deep venous thrombosis: before and after *Improving diagnosis and adjusting duration of therapy*

Clinical diagnosis of deep venous thrombosis (DVT) can be challenging. Wells et al<sup>1</sup> have published a clinical model for predicting the probability of thrombosis. The main difficulty with trying to use this model in practice is its relative complexity: it is difficult to remember all the points necessary for accurate risk stratification.

### Diagnosing DVT

I have a copy of the Wells model stored in my office computer, and I print it out if I suspect DVT (Table 1). I check off all positive findings right on the table. If the probability of DVT is high (85%), I send my patient to the emergency room (ER) with a photocopy of the table. If the probability is intermediate (33%), I book an ultrasound (US) and another in 1 week if findings are negative (reports have indicated that a negative D-dimer assay combined with negative results of US rule out DVT, so the second US might no longer be necessary).<sup>2</sup> If the probability is low (5%), an initial US rules out DVT.

The study by Wells et al, however, was done on patients referred to hospital centres for suspected DVT (prevalence of thrombosis in the two Canadian hospitals was 21% and 22% and in the Italian centre, 42%). The probability of DVT in an office setting is likely lower, so US might not be necessary for all low-risk patients.

With the advent of low molecular weight heparin therapy, rapid discharge and home therapy for

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**Table 1. Probability of deep vein thrombosis**

MAJOR POINTS	
.....	Cancer treatment that is ongoing, within the last 6 months, or palliative
.....	Paralysis or recent plaster immobilization of a leg
.....	Recently bedridden for longer than 3 days or major surgery less than 4 weeks ago
.....	Localized tenderness along a deep vein
.....	Thigh and calf swollen
.....	Calf swelling greater than 3 cm compared with side without symptoms (10 cm below tibial tuberosity)
.....	Strong family history of DVT (two or more first-degree relatives with DVT)
MINOR POINTS	
.....	Trauma to symptomatic leg within last 60 days
.....	Pitting edema in the symptomatic leg only
.....	Dilated superficial veins in the symptomatic leg only
.....	Hospitalization within the last 6 months
.....	Erythema
CLINICAL PROBABILITY	
High (85%)	
.....	3 major points, no other diagnosis
.....	2 major points and 2 minor points, no other diagnosis
Low (5%)	
.....	1 major point and ≤2 minor points, and alternate diagnosis
.....	1 major point and ≤1 minor point, no other diagnosis
.....	0 major points and ≤3 minor points, and alternate diagnosis
.....	0 major points and ≤2 minor points, no other diagnosis
Moderate (33%)	
.....	All other combinations

*Adapted from Wells et al.<sup>1</sup>*

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patients with DVT has become current practice. Stratifying our patients according to their risk might well expedite ER visits for those at highest risk (or possibly avoid them entirely in the future) and avoid unnecessary ER stays and investigations for those at lower risk.

### **Duration of therapy**

Once patients are sent home, they have traditionally been given 3 to 6 months of warfarin therapy to prevent recurrence. Current research, however, has cast doubts on this practice. Clots form because of a combination of external thrombotic stimuli and internal genetic susceptibility<sup>3</sup>; where exactly the balance lies determines the risk of recurrence.

Some have suggested that, if a patient is at low risk of recurrence (ie, if a strong, temporary, reversible

risk factor, such as recent surgery, is present), 6 weeks of anticoagulation therapy is appropriate.<sup>4</sup> If there are ongoing risk factors (eg, cancer), patients are at high risk, and indefinite therapy is likely warranted. Patients who have DVT with no identifiable risk factors likely have an inherited coagulation disorder, and will probably form clots again with only minimal injury. They could well be candidates for very long-term anticoagulation therapy.<sup>5</sup>

Patients who have a second episode of DVT should be considered for long-term therapy, as risk of recurrent DVT after 4 years is 20.7%.<sup>6</sup> It seems to me that the blanket requirement for 6 months of anticoagulation therapy after DVT is no longer appropriate. We will have to think about where our patients fit along the continuum of risk, and adjust the length of anticoagulation therapy accordingly. ❖

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### References

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