Should you treat an upper extremity deep venous thrombosis with anticoagulation?

Evidence-Based Answer
An upper extremity deep venous thrombosis (DVT) should be treated with low-molecular-weight heparin or unfractionated heparin acutely, and then with oral anticoagulation for at least 3 months. (SOR B, based on an evidence-based guideline with low-quality evidence.)

Outcomes in patients managed in this way are similar to outcomes of patients with lower extremity DVTs managed with anticoagulation. (SOR B, based on a comparative cohort study.)

Upper extremity DVT is a relatively rare form of venous occlusive disease, accounting for approximately 4% of all DVTs. Currently, no randomized studies have been published on the need, duration, or intensity of long-term anticoagulation. Recent reviews have shown that approximately 56% of patients with upper extremity DVT were discharged from the hospital with anti-vitamin K therapy.¹

An evidence-based guideline by the American College of Chest Physicians on antithrombotic therapy for venous thromboembolism disease was recently released.² This guideline’s grading system classifies recommendations as strong (grade 1) or weak (grade 2) based on the benefits, risks, burdens, and the confidence in the estimates of those risks and burdens. In addition, these guidelines classify the quality of evidence as high (grade A), moderate (grade B), and low (grade C) based on factors that include the study design, consistency of the results, and the directness of the evidence.³

The guideline states that the treatment of upper extremity DVT should be similar to that of the treatment of lower extremity DVT. Treatment should be initiated with therapeutic doses of low-molecular-weight heparin or unfractionated heparin and then treatment with anti-vitamin K therapy for at least 3 months (grade 1C). This guideline notes that there is little evidence to support long-term anticoagulation for a first, unprovoked upper extremity DVT.²

A recent prospective study followed 11,564 patients with acute DVT, of which 512 patients (4.4%) had an upper extremity DVT, for 3 months after anticoagulation therapy. Etiologically, 38% of patients (196/512) with upper extremity DVT had cancer and 45% (228/512) had catheter-related DVT.¹

No significant differences were noted in major outcomes between patients with upper and lower extremity DVTs receiving the same management (major bleeding: odds ratio [OR] 0.99; 95% confidence interval [CI], 0.54–1.82; recurrent DVT: OR 1.43; 95% CI, 0.79–2.57; pulmonary embolism: OR 1.53; 95% CI, 0.77–3.02). This study suggests that the intensity and duration of therapy does not need to differ for lower and upper extremity DVT.¹

A recent small retrospective study of 31 patients with upper extremity DVT was conducted to evaluate postthrombotic syndrome after treatment with anticoagulation for 3 to 6 months. This study followed acute DVT not associated with either malignancy or central venous catheters. At 5-year follow-up, 71% of patients did not have postthrombotic syndrome. Key weaknesses included the small sample size and the lack of a control group.⁴

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Should you use anticoagulation in an elderly patient with atrial fibrillation?

Evidence-Based Answer
The use of anticoagulation in patients older than 75 years with atrial fibrillation reduces the incidence of stroke and death. (SOR B, based on a randomized controlled trial [RCT] and a cohort study.) Evidence is conflicting concerning whether the risk of severe hemorrhage is increased.

Atrial fibrillation is associated with a 5-fold increase in the risk of stroke, and this risk increases with age.¹ Some uncertainty remains, however, about the optimum treatment of elderly patients with atrial fibrillation.
A 2007 RCT involving 973 patients with atrial fibrillation older than 75 years (mean age 81.5) compared warfarin (with a goal international normalized ratio [INR] of 2–3) to aspirin 75 mg and followed for an average of 2.7 years. The warfarin group had fewer primary events (major stroke, arterial embolization, and intracranial hemorrhage) compared with the aspirin group (1.8% vs 3.8%, respectively; relative risk [RR]=0.48; 95% confidence interval [CI], 0.28–0.80). The number needed to treat (NNT) for 1 year to prevent 1 primary event was 50. This study also showed no evidence of increased risk of an intracranial hemorrhage, fatal hemorrhage, or the need for transfusion or surgery when comparing warfarin with aspirin (RR=0.88; 95% CI, 0.46–1.63).1

In a recent prospective, observational cohort study, 270 patients (mean age 77 years) with chronic nonvalvular atrial fibrillation who received anticoagulation or no anticoagulation were followed for an average of 20 months. Patients with contraindications to oral anticoagulation received aspirin or antiplatelet therapy; patients with at least 1 additional cardioembolic risk factor (apart from age) were offered oral anticoagulation. A total of 160 patients received anticoagulation with warfarin (goal INR of 2–3), 103 received aspirin, and 7 received other antiplatelet therapy.2

Compared with patients not receiving anticoagulation, the anticoagulated patients had a lower rate of annual embolic events (0.75% vs 8.79%, \(P<.001\)) and total mortality (3.36% vs 8.24%, \(P=.023\)), without significant differences in severe bleeding rate (2.61% vs 1.10%, \(P=.25\)). In this study, 70% of patients (189/270) had 1 or 2 additional cardioembolic risk factors in addition to age (mostly hypertension and diabetes).2

A recent observational study involving 472 patients older than 65 years (54% were >75) were followed for 1 year after initiating warfarin for atrial fibrillation. This study assessed the rate of “major” hemorrhage, defined as hemorrhages that were fatal, required hospitalization with transfusion, or involved an intracranial, retroperitoneal, or pericardial site.3 Twenty-six patients sustained a major hemorrhage. The rate of major hemorrhage was 7.2 per 100 person-years (95% CI, 4.9–10.6), and the rate of intracranial hemorrhage was 2.5% (95% CI, 1.1–4.7). Patients older than 80 years had higher rates of bleeding compared with younger patients (13.1 vs 4.8 per 100 person-years, \(P=.01\)).3

A 2006 guideline produced jointly by the American College of Cardiology, the American Heart Association, and the European Society of Cardiology recommended the use of anticoagulants for patients who have 2 or more risk factors for stroke (age >75, congestive heart failure, hypertension, diabetes, and previous stroke or transient ischemic attack). The guidelines also stated that patients older than 75 years are at a higher risk of bleeding and can be treated with a lower INR. However, no evidence was presented to support a lower goal.4


Are inhaled corticosteroids effective for patients with chronic obstructive pulmonary disease?

Evidence-Based Answer

In patients with stable chronic obstructive pulmonary disease (COPD), inhaled corticosteroids (ICS) do not decrease the risk of all-cause mortality when compared with or added to nonsteroid inhaled therapy, although they increase the risk of pneumonia. (SOR A, based on 2 meta-analyses.) Combination therapy with ICS and long-acting \( \beta_2 \)-agonists (LABA) is associated with a lower incidence of moderate (but not severe) COPD exacerbations and improved health-related quality-of-life total scores. However, the size of these benefits does not reach suggested clinically important minimal differences. (SOR A, based on 2 meta-analyses.)

A 2009 systematic review evaluated the safety and efficacy of combined LABA/ICS vs LABA monotherapy in stable patients (mean age 64 years) with moderate to very severe COPD. The review included 18 randomized control trials (RCTs) with a total of 12,446 patients. LABA/ICS did not decrease the num-

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