

ACP Recommendations for VTE Prophylaxis in Hospitalized Patients

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Guideline source: American College of Physicians

Evidence rating system used? No

Literature search described? No

Guideline developed by participants without relevant financial ties to industry? Yes

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Most hospitalized patients have at least one risk factor for venous thromboembolism (VTE), such as pulmonary embolism or deep venous thrombosis. The American College of Physicians (ACP) has released guidelines on VTE prophylaxis in hospitalized, nonsurgical patients, including those with acute stroke.

Recommendations

Patients should be assessed for the risk of thromboembolism and bleeding before the initiation of VTE prophylaxis.

The decision to initiate VTE prophylaxis should be based on the patient's individual risk of thromboembolism and bleeding, and the balance of benefits versus harms. Risk factors for thromboembolism are inherited (e.g., factor V Leiden mutation, prothrombin gene mutation, protein S or C deficiency, antithrombin deficiency) or are acquired (e.g., surgery, cancer, immobilization, trauma, presence of a central venous catheter, pregnancy, medication use, congestive heart failure, chronic renal disease, antiphospholipid antibody syndrome, obesity, smoking, older age, history of thromboembolism). Although there are many tools for assessing thromboembolism risk, there is insufficient evidence to recommend one over the others. General evidence regarding risk factors also may be used to make decisions about the need for prophylaxis.

Heparin or a related drug can increase the risk of

bleeding, especially in older patients; women; patients with diabetes mellitus, hypertension, cancer, alcoholism, liver disease, severe chronic kidney disease, peptic ulcer disease, anemia, poor treatment adherence, previous stroke or intracerebral hemorrhage, bleeding lesions, or bleeding disorder; and in patients taking certain concomitant medications.

Prophylaxis with heparin or a related drug is recommended unless the risk of bleeding outweighs the likely benefits.

Prophylaxis with heparin has been shown to significantly reduce pulmonary embolisms in hospitalized patients, although bleeding events were increased. In most patients, the clinical benefit of decreased pulmonary embolisms outweighs the risk of bleeding. Evidence is insufficient to conclude that these risks and benefits differ in patients with stroke, although prevention of recurrent stroke may be an added benefit in these patients.

The optimal duration of heparin therapy is unclear. The benefits and risks are not significantly different between low-molecular-weight heparin and unfractionated heparin, and fondaparinux (Arixtra) has not been directly compared with heparin. The choice of medication should be based on ease of use, adverse effect profile, and cost.

Mechanical prophylaxis with graduated compression stockings is not recommended.

Use of graduated compression stockings was not shown to be effective in preventing VTE or reducing mortality, and can cause clinically important damage to the skin. Intermittent pneumatic compression may be a reasonable option if heparin is contraindicated, because evidence suggests that it is beneficial in patients undergoing surgery. However, the therapy has not been sufficiently evaluated as a stand-alone intervention in other patients. ■

Answers to This Issue's CME Quiz

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|-------------|----------------|----------|
| Q1. D | Q4. D | Q7. C, D |
| Q2. C | Q5. A, B, C, D | Q8. A, B |
| Q3. A, B, C | Q6. A | Q9. A, B |