1. Considering the significant prevalence of factor V Leiden in the general population, for which patients, if any, would you recommend preoperative evaluation for inherited thrombophilias?

Response from Drs. Clarke-Pearson and Abaid:

Factor V Leiden mutation has a 5% prevalence in the general population, primarily in Caucasians, and a 20% prevalence in those with a history of a clot. All Caucasians with a prior deep vein thrombosis (DVT) should be tested, with individualized testing for those of Hispanic, Asian, or African American descent. Women who test negative for factor V Leiden mutation but have a strong personal or family history of thrombosis may be tested for prothrombin gene mutation G20210A, deficiencies in proteins C, S, or antithrombin III, or antiphospholipid antibodies.

2. Considering the equivalent efficacy, fewer injections, and decreased risk of heparin-induced thrombocytopenia with low molecular weight heparin (LMWH) compared with low-dose unfractionated heparin, in what setting would you advocate using low-dose unfractionated heparin instead of LMWH?
Response from Drs. Clarke-Pearson and Abaid:
The primary advantage of low-dose unfractionated heparin over LMWH is lower cost. However, several studies have suggested that the less frequent administration and potentially safer adverse effect profile of LMWH may offset increased in-hospital drug costs. For patients receiving extended thromboembolism prophylaxis, the out-of-pocket expense of LMWH may be prohibitive, in which case low-dose unfractionated heparin can be substituted.

3. Apart from patients with renal insufficiency using enoxaparin, does monitoring anti-factor Xa activity levels have a role in patients receiving prophylactic LMWH?

Response from Drs. Clarke-Pearson and Abaid:
While anti-Xa levels may need to be occasionally checked in patients receiving therapeutic-dose LMWH, there is no indication for routinely monitoring levels when using prophylactic doses in patients with normal renal function.

4. Acknowledging that evidence is lacking for optimal intermittent pneumatic compression use to prevent venous thromboembolisms, what do you propose as the required number of days and hours per day that intermittent pneumatic compression devices should be applied to elicit maximal efficacy?

Response from Drs. Clarke-Pearson and Abaid:
IPC devices should be used continuously until patients are ambulatory and the Foley catheter is removed. Once patients are ambulating during the day they can be removed, but should be replaced at night for the remainder of the hospitalization.

5. Considering the high risk of venous thromboembolism in elderly patients with cancer, is there any role for preoperative screening for an occult venous thromboembolism?
Response from Drs. Clarke-Pearson and Abaid:

Any patient with preoperative symptoms of venous thromboembolisms should be evaluated prior to surgery. In especially high-risk asymptomatic patients, such as those with a personal history of venous thromboembolisms or a molecular hypercoagulable state, preoperative lower extremity ultrasonography could be considered. However, only 4% of asymptomatic calf thrombi propagate to the proximal leg veins, and an additional 4% become pulmonary embolisms. So the preoperative detection of asymptomatic calf thrombosis may not significantly affect clinically relevant thromboembolic events.

6. Do you recommend weight-based dose adjustment of LMWH (eg enoxaparin) for DVT prophylaxis?

Response from Drs. Clarke-Pearson and Abaid:

The standard daily prophylactic dose of enoxaparin is 40 mg. Patients with compromised renal function should have a 25% dose reduction, or 30 mg daily. Patients weighing less than 40 kg (90 lbs) should also be considered for a reduced dose. In morbidly obese patients undergoing bariatric surgery, prophylactic enoxaparin doses up to 60 mg twice a day were effective and well tolerated1,2. Patients with a body mass index (BMI) over 40 and normal renal function could benefit from twice-daily administration of 40 mg enoxaparin, and those with a BMI over 50 may need up to 60 mg twice daily. However, while safe and well tolerated, it is unclear whether increasing the dose, frequency, or both of prophylactic enoxaparin significantly reduces VTE in obese patients.

7. Would you consider prolonged LMWH prophylaxis in postoperative gynecologic oncology patients to be the standard of care?

Response from Drs. Clarke-Pearson and Abaid:

Patients at highest risk for VTE include women over age 60 undergoing major surgery who also have cancer, a prior VTE, or a molecular hypercoagulable state. While it is not considered standard of care to give prolonged postoperative prophylaxis in all patients with these risk factors, it is certainly reasonable to consider, especially in those who are also obese or have limited mobility.
8. Is there a particular LMWH preferable to others for all patients? For particular subsets of patients?

Response from Drs. Clarke-Pearson and Abaid:
The most commonly used LMWHs are enoxaparin and dalteparin, and for the majority of patients are equivalent in efficacy and complications. In patients with renal insufficiency, enoxaparin has been shown to accumulate more rapidly when compared with dalteparin, making dalteparin a safer choice in this subset of patients.

References