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BULLETIN:

ASH GUIDELINES FOR VTE

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by Lynne Peterson

In a web briefing for reporters, American Society of Hematology (ASH) officials outlined the new guidelines for venous thromboembolism (VTE). Adam Cuker, MD, a hematologist from the University of Pennsylvania and chairman of the ASH VTE Guidelines Committee, noted that nearly a million Americans each year develop a deep vein thrombosis (DVT) or pulmonary embolism (PE), and people who have a DVT or PE have a 33% increased risk of a second one in the next 10 years. And these clots can be deadly, with ~10% of hospital deaths due to a PE, and 100,000 Americans die each year from a VTE (that's nearly 275 people per day).

Other experts reviewed the new guidelines for a variety of situations. In brief, here are the highlights of what they highlighted. It was interesting that there was little discussion of how to use novel oral anticoagulants (NOACs) or how to choose among them, and there was only a very brief mention of reversal agents – and a recommendation to use them very sparingly, partly because of cost.

Prophylaxis for medical patients

Mary Cushman, MD, director of the Thrombosis and Hemostasis Program at the University of Vermont, said prevention of VTE in hospitalized patients is "tricky because anticoagulants have serious bleeding risks…So, an initial risk assessment for thrombosis and bleeding is needed…This is very different from cardiac prevention where you are considering low-risk medications like statins." Among the 21 recommendations:

- *Patients at high risk of VTE:* mechanical prophylaxis (pneumatic compression, compressing sleeve, compression stockings) is preferred.
- *Patients not at high risk:* blood thinners recommended over mechanical prophylaxis.
- *In-hospital patients:* low molecular weight heparin (LMWH), *not* a NOAC and *not* combination prophylaxis.

Diagnosis of VTE

Wendy Lim, MD, a hematologist from McMaster University in Canada, said many patients who present with the signs of VTE don't have a VTE. Among the 10 recommendations on diagnosis:

- Before testing, patients should be categorized as having a low, intermediate, or high probability of VTE.
- D-dimer is the best first step, and nothing more is needed if it is negative.
- If the D-dimer test is positive, a VQ scan is preferred to a CT scan, except perhaps for patients with pre-existing lung disease.

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Optimal management of anticoagulation

Daniel Witt, PharmD, chair of the Department of Pharmacotherapy at the University of Utah, said the panel had 25 recommendations, including:

- Patients on warfarin should get it from specialized anticoagulation management service centers, not primary care physicians.
- Patients who need to interrupt warfarin for invasive procedures do *not* require a short-acting injectable anticoagulant as a bridge therapy.
- Management of life-threatening bleeding during anticoagulant therapy requires *"thoughtful use of anticoagulant reversal therapies. It is important these be used only in appropriate patients because of the risk of thrombosis and because some of them are very expensive."*
- For patients who survive a major bleeding episode, resumption of anticoagulant therapy should be considered.

Heparin-induced thrombocytopenia (HIT)

Dr. Cuker said that of the 12 million U.S. patients who receive heparin each year, up to 1% will develop HIT, which he said is a serious adverse drug reaction that "increases a patient's risk of developing a venous or arterial thromboembolism, which may be limb- or life-threatening…For every day treatment is delayed, there is a ~6% risk of new thrombosis, amputation, and death." He said HIT in hospitalized patients is the most frequently requested hematologist consult requested by other physicians. Of the 32 guideline recommendations, he highlighted just two:

- Use of the 4Ts score (not a commercial test) rather than a gestalt approach.
- Treatment options include conventional agents, such as argatroban (generic), bivalirudin (The Medicines Company's Angiomax), and danaparoid (Diapharma's Orgaran), but also newer agents such as fondaparinux (generic but not FDA approved for HIT) and NOACs.

VTE in pregnancy

Shannon Bates, MDCM, a hematologist from McMaster University, said pregnancy-associated VTE is a leading cause of maternal morbidity and mortality in Western countries, but many healthcare providers are very "uncomfortable with this area." Among the 31 guideline recommendations were:

- A conservative approach to prescribing prophylaxis, giving it only to patients where research suggests a benefit in order to avoid harm.
- LMWH is generally the best approach for managing superficial thrombosis.
- For PE and DVT, weight-based dosing of a LMWH is acceptable.
- Newly-diagnosis low-risk VTE can be treated outpatient.

Pediatric VTE

Paul Monagle, MD, MBBS, a hematologist from the University of Melbourne, Australia, said the incidence of VTE in children is very low, but it is higher in hospitalized children, affecting mostly very ill children. The guidelines are only for treatment, not prophylaxis, and do not cover use of NOACs in children. Among the 30 recommendations were:

- For central-line-associated clots, remove the line.
- All children with renal vein thrombosis should receive an anticoagulant.