

# PREVENTING AND TREATING THROMBOEMBOLISM IN THE 21ST CENTURY

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**V**ENOUS AND ARTERIAL thromboembolism are important causes of morbidity and mortality in the United States. Since the first randomized trial in 1960 establishing the life-saving role of heparin in patients with pulmonary embolism, the diagnosis and treatment of thromboembolism have undergone major advances. In particular, new parenteral anticoagulant therapies have revolutionized the care of patients with venous thromboembolism. Currently available agents include the low-molecular-weight heparins, the direct thrombin inhibitors, and a synthetic pentasaccharide. Other new anticoagulant classes are under development. In contrast, since their development 60 years ago, vitamin K antagonists have remained the only commercially available oral antithrombotic drugs in the United States.

Despite its unpredictable anticoagulant response, narrow therapeutic range, and many drug and food interactions, warfarin remains the most widely used vitamin K antagonist in North America. Late last year the US Food and Drug Administration unanimously rejected approval of an oral direct thrombin inhibitor, ximelagatran, because of concerns over hepatotoxicity. However, ximelagatran has demonstrated equivalent efficacy to conventional therapy in more than a dozen clinical trials among patients at risk for venous and arterial thromboembolism. Thus, there is good reason to continue the quest for a safe and convenient oral alternative to warfarin.

This supplement brings together experts in thromboembolism and anticoagulation to lay out this changing landscape through seven state-of-the-art, evidence-based reviews addressing common clinical problems. Our topics include the pharmacology of anticoagulants; advances in the prevention, diagnosis, and management of thromboembolism; heparin-induced thrombocytopenia; and anticoagulant dosing in patients who are obese, pregnant, or who suffer from renal impairment or cancer. We conclude by presenting economic considerations to help physicians choose among various anticoagulation strategies.

I am excited that this supplement is being distributed to nearly 100,000 physicians around the nation. I hope you find our efforts useful, and I encourage readers to e-mail me with feedback or questions.

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