

Introduction

Venous thromboembolism (VTE) and its manifestations—including deep vein thrombosis (DVT) and pulmonary embolism (PE)—are serious medical conditions associated with high rates of morbidity and mortality.¹ An estimated 300,000 patients are hospitalized each year in the United States due to VTE.² Furthermore, patients hospitalized for reasons other than VTE typically have at least 1 risk factor for VTE.³ Depending on the surgical procedure, DVT occurs in 10% to 60% of hospitalized patients who do not receive prophylaxis. Studies have found that 10% of hospital deaths are attributed to PE, with the majority of these deaths occurring in patients who have not recently undergone surgery.³ The incidence of VTE also is associated with enormous financial cost; an estimated \$1.5 billion is spent each year on expenses associated with DVT in the United States alone.⁴

VTE is a life-threatening illness that has multiple causes but few warning signs. Symptoms of DVT may include pain, erythema, tenderness, and swelling of the affected limb, whereas PE often presents as sudden breathlessness with chest pain or collapse with shock in the absence of other causes.⁵ Yet, VTE prophylaxis is often underutilized. This issue of *Clinical Cornerstone* presents 6 articles that focus on the need for greater awareness of VTE and encourage health care professionals to take appropriate preventive measures to reduce the incidence of VTE and its potentially life-threatening manifestations.

The first article by Franklin Michota, MD, describes the epidemiology of VTE, its consequences, and how to identify patients at risk for VTE. Dr. Michota also highlights the need for prompt and accurate recognition of risk factors that can lead to the implementation of effective VTE prophylaxis.

The second article by Walter Ageno, MD, and Alexander G.G. Turpie, MD, reviews the findings of several studies that investigated the use and effectiveness of thromboprophylaxis among medical patients. They found that these studies support the evidence-based recommendations for the systematic use of pharmacologic agents for VTE prevention in patients at risk for VTE.

The third article by Arthur Wheeler, MD, takes a close look at the updated guidelines for the prevention of VTE

established by the Seventh American College of Chest Physicians (ACCP) Conference on Antithrombotic and Thrombolytic Therapy and discusses the high prevalence of VTE among medically ill patients. Dr. Wheeler also describes various strategies that can be used for VTE prophylaxis, highlighting relevant clinical studies that support the use of antithrombotic therapy.

Practical applications of the ACCP revised guidelines on VTE prevention for primary care physicians is the focus of the fourth article by Geno J. Merli, MD, FACP. Physicians are encouraged to assess VTE risk factors for each patient—as well as the underlying illness or surgical procedure of each patient and the benefits and risks of possible therapies—to determine the appropriate course of action for each patient. This article also discusses the need for hospitals to adopt clinical guidelines for VTE prevention, recognizing the growing impact of an aging population that experiences more surgical procedures with shorter durations of hospital stays.

The fifth article by Alex C. Spyropoulos, MD, FACP, FCCP, reports on the findings of several studies regarding pharmacologic therapy options for thrombosis management in VTE and non-ST-elevation acute coronary syndrome. Dr. Spyropoulos discusses various efficacy, safety, and pharmacoeconomic considerations relating to the selection of a low-molecular-weight heparin versus unfractionated heparin for the prevention of VTE events.

The sixth article by Geno J. Merli, MD, FACP, describes specific strategies that can be used to prevent VTE, including anticoagulant therapy with heparin (low-molecular-weight heparin or unfractionated heparin), direct thrombin inhibitors, oral anticoagulants (such as warfarin), and mechanical methods. Dr. Merli also discusses the role of aspirin therapy in patients at risk for VTE.

Greater awareness of VTE and the need for VTE prophylaxis can lead to widespread use of effective interventions to help reduce the incidence of thromboembolic events in patients who receive health care services throughout the United States.

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