

Venous Thromboembolism and Cancer: Current Issues and Treatment Updates

Venous thromboembolism (VTE) is becoming recognized as a significant complication that appears to be more prevalent than previously thought.¹ In itself, active cancer accounts for approximately 20% of all new VTE events,² and patients with cancer have a 6-fold higher risk for VTE than those without.³ Furthermore, this risk is higher in patients with some specific tumor types and in those who have surgery or are ill or incapacitated. With the advent of additional chemotherapeutic and biologic agents that have thrombotic properties — such as thalidomide (Thalomid®, Celgene Corp, Warren, NJ) or bevacizumab (Avastin®, Genentech Inc, South San Francisco, CA) — the incidence of VTE may well increase. Most notable, we know that patients who have VTE and cancer do not survive as long as cancer patients without this complication.⁴

The seriousness of VTE as a complication in cancer patients is finally being recognized as an important medical issue. Noteworthy is the September 2004 publication of the *American College of Chest Physicians (ACCP) Conference on Antithrombotic and Thrombolytic Therapy: Evidence-Based Guidelines*.⁵ These guidelines address the growing body of literature regarding this relationship and highlight the increased risk of VTE in patients with cancer. The guidelines are also beginning to evaluate and compare various rational therapeutic options using an evidence-based approach. There is a growing body of interest in the role of low-molecular-weight heparins (LMWHs) as a therapeutic intervention for VTE. The advantages of these agents (eg, no need for laboratory monitoring, a favorable safety profile, a simple dosing regimen), coupled with the potential of easier long-term administration as compared with unfractionated heparin and oral vitamin K antagonists, have stimulated clinical investigators to evaluate the value of these agents in prospective randomized clinical trials in patients with cancer. As a result, there is a growing body of evidence that supports the role of LMWHs as therapeutic interventions in the management and prevention of recurrent VTE events in cancer patients.^{6,7} In addition, intriguing reports suggest that LMWHs may have the capacity to prolong survival in cancer patients.⁸⁻¹⁰ These data are not sufficiently robust, however, to recommend treatment with this goal in mind.

To this end, there is continuing need to educate hematologists and oncologists regarding VTE and cancer and to examine various therapeutic options for cancer patients. This need is highlighted by evidence that medical oncologists underprescribe VTE prophylaxis.¹¹ Furthermore, it appears that no oncology-specific guidelines have yet been published to identify cancer patients who are at highest risk for VTE or to exactly define the role of various therapeutic options, including LMWHs.

The goals of this supplement, titled *Venous Thromboembolism and Cancer: Current Issues and Treatment Updates*, are two-fold. The first objective is to develop a balanced review of current issues specific to this topic. The second is to provide educational value to the hematology/oncology community via continuing education credit associated with this publication.

With these objectives in mind, this supplement has been designed to explore a number of topics. John Heit, MD, from the Mayo Clinic opens the publication with a review of the pathophysiology of hypercoagulation and the epidemiology of VTE. He describes the characteristics of patients at highest risk and the optimal methods for diagnosing VTE. Howard Liebman, MD, from Norris Cancer Center/USC-Keck School of Medicine then describes the scope of the problem of VTE and cancer and discusses the prevalence of VTE, the factors that might increase the risk for this complication, and primary prophylaxis. Agnes Lee, MD, and Mark Levine, MD, from McMaster University follow with a report on the use of antithrombotic agents in the management of VTE. They discuss the implications of the CLOT trial⁶ (comparison of low-molecular-weight heparin vs oral anticoagulant therapy for the prevention of recurrent venous thromboembolism) and indicate the strength of these data as summarized in the 2004 ACCP evidence-based guidelines for VTE prophylaxis and management.⁵ Ajay K. Kakkar, MD, from the Imperial College School of Medicine then examines the potential impact of antithrombotic therapy on the survival of cancer patients. Finally, I summarize the information provided by responding to questions that oncologists frequently ask regarding VTE.

We hope that this supplement will raise awareness and invite further discussion on the topic of VTE and cancer. Thus, we look to encourage the development of

more formal oncology-specific guidelines by either the National Comprehensive Cancer Network (NCCN) or the American Society of Clinical Oncology (ASCO) that would aid clinicians and their patients alike.

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