Preface

Cardiologists have traditionally focused their efforts on the heart. During the past 2 decades, we have witnessed the expansion of cardiology to include training and expertise in the systemic vasculature, as well as the heart itself. The contemporary cardiovascular specialist can manage complicated disease of the leg arteries, as well as the renal and carotid arteries. We cardiologist have expanded our role and now view ourselves as specialists in the broad field of cardiovascular medicine. Nowadays, cardiovascular specialists constitute a group that includes interventionalists in the catheterization laboratory who “feel at home” stenting coronary, renal, or carotid arteries.

Despite increased appreciation of the “vascular” portion of “cardiovascular” medicine, venous disease has traditionally been viewed as unwanted stepchild. In the United States, internists, hematologists, or pulmonologists have managed the majority of patients with acute deep vein thrombosis (DVT) or pulmonary embolism (PE). In Europe, the subspecialty of angiology is better established to provide expertise in venous thromboembolism (VTE).

As a cardiologist with a 30-year interest in PE, I was delighted to learn that the Society for Vascular Medicine and Biology, the American Heart Association, and its premier clinical journal, Circulation, have decided that the topic of VTE warrants a comprehensive series of 4 supplements. The first 3 issues covered the broad areas of epidemiology, diagnosis, and treatment. The guest editors, authors, and specially appointed editorial board worked hard to ensure top quality overviews of these crucially important topics. I was flattered to be invited to participate as guest editor for this final supplement.

Prevention of VTE often seems to be a mundane mission, devoid of glamor. It lacks the academic intrigue of epidemiology, the thrill of successful detection of an often occult PE, or the urgency of treatment. Neither patients nor physicians pause to show appreciation to the consulting cardiologist by saying, “Thank you for your suggestions that helped avoid a PE.” The lack of glitz means that prophylaxis of VTE is often saved for the last few slides of a lengthy lecture or comprehensive review article describing an overview of the field. Yet, the benefits of prevention have a huge “multiplying effect.” By averting venous thrombosis, we decrease morbidity, improve survival, and save health care dollars.

How do I conceptualize prophylaxis against DVT and PE? To me, implementation of VTE prophylaxis is analogous to vaccination against an infectious disease. Prophylaxis is almost always effective, safe, and inexpensive. Like vaccination, achieving a high level of compliance is challenging and at times problematic. Three successful strategies for both prophylaxis and vaccination include: (1) improving the knowledge base of health care providers, (2) devising systems that rely on electronic surveillance, reminders, and alerts, and (3) mandating action under certain circumstances. Incentives and penalties for health care providers may be appropriate if less subtle methods remain ineffective.

The editorial board gave me complete editorial freedom in deciding what 4 topics to feature within the realm of VTE prevention. Because Europeans have embraced and succeeded in achieving high utilization rates of prophylaxis, I felt that contributions to this supplement should have an international scope. Although prophylaxis is often considered narrowly as primary prevention, this supplement benefits from discussion of secondary prevention, too. Finally, a discussion of preventive efforts is incomplete without considering the effects of health care costs. Therefore, the final article deals with cost-effectiveness of VTE prophylaxis.

In the first article in this supplement, Giancarlo Agnelli, MD, a vascular medicine specialist from the University of Perugia, updates the wide array of available choices of proven mechanical and pharmacological prophylactic strategies for various surgical procedures. Understanding our options for preventing PE is of critical importance when we are consulting on surgical service patients.

The highest rate of developing new VTE while hospitalized is attributed to those patients with medical illness. The problem is a combination of omission or inadequate prophylaxis. Fortunately, large-scale clinical trials have shown the efficacy and safety of using various pharmacological prevention regimens. Alain Leizorovicz, MD and Patrick Mismetti, MD of the Unité de Pharmacologie Clinique place in perspective 3 groundbreaking trials and the entire subject of preventing VTE in medical service patients.

Secondary prevention is important because patients who have experienced a prior DVT or PE are at increased susceptibility for a recurrence. Our concept of secondary prevention has changed radically because we now realize that a subset of VTEs occur outside the context of surgery and trauma; these patients may have a persistently high, perhaps lifelong increase, in the likelihood of a recurrent event. I review in detail the field of secondary prevention, particularly 3 trials demonstrating the utility and safety of indefinite duration anticoagulation among properly selected subjects.

Implementation of algorithms and protocols, no matter how efficacious and safe, must undergo scrutiny to determine...

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cost-effectiveness. This proviso holds true for prevention of VTE. In the concluding article of the supplement, Jerry Avorn, MD and Wolfgang C. Winkelmayer, MD, ScD of Brigham and Women’s Hospital guide us through the methodological issues in cost-effectiveness analysis. This is especially important when we are advocating an expansion of hospital pharmacy budgets to accommodate more widespread use of prophylaxis with low-molecular-weight heparins and fondaparinux.

After years of dormancy, VTE prophylaxis has emerged as a “hot topic.” Mechanical preventive measures such as intermittent pneumatic compression boots are undergoing incremental improvement in design and engineering. An array of novel anticoagulants holds promise for more effective, convenient, and safer drug administration. The gravity of overlooking preventive efforts is now widely recognized, and deep-rooted behavioral and cultural changes are under way to improve implementation of evidence-based practice. This supplement is intended to provide you with a convenient guide to progress in the field.

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Guest Editor