Preface

The first issue of this series of supplements on venous thromboembolic disease is devoted to the epidemiology, risk factors, and natural history of venous thromboembolism (VTE). The monograph consists of four chapters. Epidemiology of VTE is described by Dr. Richard White of the University of California, Davis. He notes that the average population incidence of VTE is \( \approx 1 \) per 1000 persons per year in North America but that this risk is greatly influenced by age and ethnicity. VTE is \( >100 \) times more common in the elderly than it is in children and, generally, the incidence doubles with each decade of age. Asians have a risk of VTE of about one fifth that of Caucasians and African-Americans. There is no convincing difference in the risk of VTE between men and women.

Risk factors for VTE are described by Drs. Fredrick Anderson and Fredrick Spencer of the University of Massachusetts Medical School, Worcester. They note that about one half of VTE episodes are associated with hospital admission, the frequency in surgical and medical patients being similar. The risk of VTE differs markedly among hospitalized patients, and guidance is provided on how to identify those who are at moderate or high risk and should routinely receive prophylaxis. Hereditary and acquired biochemical states are associated with VTE in about one third of episodes; the prevalence and severity of these conditions as risk factors are described. It is noted that VTE risk is determined as much by the number of risk factors present in any one patient as it is by the strength of association of each factor.

Cancer and VTE is described by Drs. Agnes Lee and Mark Levine of McMaster University, Hamilton. They describe the increase in VTE that is associated with different types and stages of cancer, and discuss how cancer treatments may further increase this risk. Among patients with an apparently unprovoked episode of VTE, cancer subsequently declares itself \( \approx 5\% \) of the time, often within 6 months of when VTE is diagnosed. As patients with occult cancers that are associated with VTE often have extensive disease, the authors suggest that broad screening for cancer in patients with unprovoked VTE is unlikely to result in improved outcomes and is generally not warranted.

The natural history of VTE is described in my own chapter. It is noted that VTE usually starts in the calf veins, from where it may extend to involve the proximal veins before subsequently breaking free and causing pulmonary embolism. Progression of VTE through successive stages, each of which may or may not manifest symptoms, has important implications for prevention, diagnosis, and treatment of deep vein thrombosis and pulmonary embolism. Furthermore, treatment of VTE is designed to arrest or reverse this process.

The goal of this issue is to provide clinicians with a quantitative understanding of the risks of deep vein thrombosis and pulmonary embolism in predefined populations and in individual patients. This knowledge is required for optimal management of persons at risk for, and those who develop, VTE. Consequently, this issue is intended to serve as a foundation for subsequent installments of this series on venous thromboembolic diseases.

Keywords: embolism ■ epidemiology ■ risk factors ■ thrombosis ■ veins

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