Guide to Using the Risk Assessment Scoring System

The scoring system consists of a comprehensive list of risk factors that have been shown by evidence-based publications to be associated with the development of deep vein thrombosis (DVT). Each risk factor is further classified according to the relative likelihood of causing a DVT compared to each other. Factors with a score of one are the least powerful causes of DVT compared to others with a higher point score. This intuitively correct approach to risk assessment has now been validated by comparing the patient scores to the proven DVT incidence in these individuals within 30 days of surgery. It is very important to identify all of the factors in a given patient since missing one or more factors may not identify the appropriate level of risk for the patient. One practical approach to obtaining all of the required information in a timely fashion is to prepare a simple questionnaire that is filled out by the patient and turned in to the admitting physician or nurse. If a computer system is available for the medical record, the data can be scanned into the record, or the patient can fill out the data on a computer interface similar to those used for checking in for flights. Calculating the score is simplified using this process.

The results of the score can be used to provide prophylaxis for patients during hospitalization or surgery. When scoring surgical patients, remember that open surgery, laparoscopic surgery, and arthroscopy are all scored as a 2. The only additional surgical points are for length of surgery and major joint replacement, fracture, or multiple trauma. Those patients with a score of < 4 can be treated during hospitalization with a low-dose UFH or LMWH or IPC. Those with a score of 4 - 8 should receive 7 - 10 days of standard prophylaxis with TID UFH, or LMWH, or Fondaparinux once daily. Those with a score of > 8 should receive this prophylaxis for thirty days. In all cases the prophylaxis should be continued as long as the patient has active risk factors.

The orthopedic population should receive prophylaxis according to ACCP guidelines; however, the length of prophylaxis should also be guided by additional risk factors. Remember that major joint replacement patients start with a score of 5 counting the surgery and if they are over 60 years of age, that is an additional 2 points. IPC during hospitalization should be used in those with a score of over 4 in addition to the appropriate anticoagulants and also in those at high risk of bleeding. Graduated compression surgical hose should not be used in any group as the prime form of prophylaxis. We also do not endorse aspirin for primary prophylaxis in any of these groups. Consideration should be given to starting anticoagulants preoperatively in those with a score of 8 in addition to IPC during and following surgery.

Joseph A. Caprini, MD, MS, FACS, RVT
Louis W. Biegler Chair of Surgery
Division of Vascular Surgery
NorthShore University HealthSystem, Evanston IL
Clinical Professor of Surgery
The University of Chicago Pritzker School of Medicine
Chicago, IL 60637
President American Venous Forum 2009-2010