

# DVT Prophylaxis Underused in Acutely Ill Patients

*Recommendations are not followed for most inpatients, registry data show.*

BY DOUG BRUNK  
San Diego Bureau

SAN DIEGO — Prophylaxis for deep vein thrombosis in hospitalized, acutely ill patients is clearly underused in the United States and Europe, results from a large international trial suggest.

"Despite the [American College of Chest Physicians] consensus guideline recommendations of 2001 and 2002 and evidence from clinical studies showing the benefits of DVT prophylaxis in acutely ill medical patients, only 44% received in-hospital prophylaxis," Victor F. Tapson, M.D., reported in a

poster session at the annual meeting of the American Society of Hematology. "I was a bit surprised at how low the rates actually were."

The findings are part of the International Medical Prevention Registry on Venous Thromboembolism (IMPROVE).

Funded by an unrestricted grant from Aventis Pharmaceuticals Inc., the purpose of the multicenter registry is to assess routine clinical practices for providing hospitalized, acutely ill patients with venous thromboembolism prophylaxis and to test predictive models of the relationship between patient char-

acteristics, prophylaxis use, and key clinical end points.

For the trial, patients aged 18 years and older who were hospitalized for at least 3 days were enrolled consecutively. Data were recorded at discharge and 3 months after discharge.

Dr. Tapson reported on 4,315 patients from 37 hospitals in 11 countries who were enrolled between January 1, 2002 and June 30, 2004. Half were female and the mean age was 69 years.

Less than half of the patients (44%) received in-hospital DVT prophylaxis, said Dr. Tapson, of Duke University Medical Center, Durham, N.C.

Low-molecular-weight heparin and unfractionated heparin were used most often. Low-molecular-weight heparin

regimens were usually given once daily.

Unfractionated heparin regimens varied. Outside of the United States, most regimens (85%) were given every 12 hours. In the United States, a similar number of patients received unfractionated heparin every 12 hours (55%) or every 8 hours (40%).

Aspirin was given as DVT prophylaxis to 7% of patients in the United States and to 3% of patients in other countries.

"Unfractionated heparin is used more for medical patient prophylaxis than low-molecular-weight heparin in the United States, while the reverse is true in Europe and certain other parts of the world," Dr. Tapson said in an interview.

"Low-molecular-weight heparin has considerable advantages, including once-daily injection and, for example, a lower risk of heparin-induced thrombocytopenia. This is very relevant to the primary care physician, particularly those that do inpatient work. They need to consider prophylaxis for every medical patient admitted, as most need it," he added.

As for mechanical methods of DVT prophylaxis, clinicians in the United States used pneumatic compression more often, compared with clinicians in other countries (19% vs. 0.3%). In contrast, clinicians in other countries used elastic stockings more often, compared with those in the United States (8% vs. 2%). ■

## Watchful Waiting Is Best for Unruptured AV Malformations

BY PEGGY PECK  
Contributing Writer

VANCOUVER, B.C. — Data from a large registry of patients with unruptured arteriovenous malformations of the brain suggest that a watchful waiting approach is safer than an attempt at surgical treatment.

The results were presented at the Fifth World Stroke Congress sponsored by the International Stroke Society.

Unruptured arteriovenous malformations (AVMs) are "relatively benign when left untreated," based on analysis of data collected from a 15-year registry at Columbia University, New York. The AVM registry has enrolled 622 patients, including 328 with unruptured lesions, said Christian Stapf, M.D., of the university, also an attending neurologist in the department of neurology at Hôpital Lariboisière, Paris.

He presented two studies based on the registry data; one reported on outcomes of unruptured AVM, and another identified risk factors for subsequent AVM rupture in both unruptured and ruptured lesions.

In the study of unruptured AVM, interventional treatment was associated with a significant 3.61 hazard ratio for spontaneous hemorrhage and a significant 8.17 hazard ratio for acute worsening.

"These patients came in with no symptoms, but after something was done to their brains, their lives were changed—significantly," Dr. Stapf commented.

The mean age of the patients was 33 years; 56% were women. All were referred to Columbia for evaluation and treatment. Columbia established its AVM registry in 1989; the average follow-up for patients with unruptured

AVM was 4.9 years. Overall, 78% had some type of treatment, he said.

The data suggest that "AVM may not be as dangerous as previously believed. The hazard of treatment, however, appears to be greater than previously believed," Dr. Stapf said in an interview.

Traditionally, untreated AVMs were believed to carry a 3% annual risk of hemorrhage, while treated lesions where thought to have a 1% risk of spontaneous hemorrhage.

"Our results suggest the exact opposite: The risk for spontaneous hemorrhage is 3% with treatment and 1% without treatment," he said.

The results are so unexpected that Dr. Stapf and his colleagues are planning a multicenter, international randomized trial to compare treatment, including surgery and embolization, with no treatment in 500 patients with unruptured AVM.

In the second study, analysis of data from all 622 registry patients indicates that three risk factors—hemorrhage at presentation, deep brain location, and exclusive deep venous drainage—are independent predictors of subsequent hemorrhage. "Age is also a risk factor, with the relative risk increasing by each year of age at presentation," Dr. Stapf said.

Patients who have all three of those risk factors have a 34.4% annual hemorrhage rate, compared with 0.9% in patients who have none of the factors. Overall, "46% of the patients presented with no risk factors for subsequent hemorrhage," he said.

Hemorrhage at presentation poses the greatest risk. "Patients who present with hemorrhage have a 47% increased risk for hemorrhage," Dr. Stapf said. ■

## AAA Screening Recommended For Male Smokers Aged 65-75

BY KERRI WACHTER  
Senior Writer

The U.S. Preventive Services Task Force is recommending that men between the ages of 65 and 75 years who are current or former smokers undergo a one-time ultrasound screening for abdominal aortic aneurysm.

The recommendation is based on new evidence that has shown that screening and surgery to repair large abdominal aortic aneurysms (AAAs) are effective at reducing the number of deaths in men as a result of this condition. Between 59% and 83% of patients with a ruptured AAA die before reaching the hospital and undergoing surgery, according to estimates.

"This is an important recommendation, because evidence now exists that screening high-risk men for abdominal aortic aneurysms can reduce deaths from aneurysm," task force chair Ned Calonge, M.D., said in a statement. Men 65 years and older who are currently smokers or who have been regular smokers are at the highest risk for AAA, according to the task force.

The recommendation is grade B, meaning that the task force found at least fair evidence that screening improves important health outcomes and concluded that benefits outweigh harms (Ann. Intern. Med. 2005;142:198-202).

In 1996, the task force last reviewed the topic and concluded that there was insufficient evidence to screen for such aneurysms.

The task force noted that there is evidence that surgery to repair the aorta in people with an aortic diameter of at least 5.5 cm reduces the number of deaths

caused by AAA, which is the cause of approximately 9,000 deaths each year in this country. However, the number may be underestimated because most people with AAA die before reaching a hospital and their deaths may be attributed to other causes.

The condition is less likely to occur in people who have never smoked, and the U.S. Preventive Services Task Force found that screening these patients for AAA would have little net benefit. Therefore the task

force made no recommendation either for or against routine screening for this condition in men between 65 and 75 years who have never smoked (grade C).

The U.S. Preventive Services Task Force is also recommending that women should not be

screened for AAA (grade D). Published research indicates that women are at low risk for such aneurysms, though few studies have been conducted in women. Death from an aneurysm is rare in women, and most of these deaths occur in women older than 80 years.

The U.S. Preventive Services Task Force found no evidence of benefit from routine screening for AAA in all women and also concluded that potential harms—mortality and complications of surgery—outweighed the potential benefits of screening and subsequent surgery.

The Agency for Healthcare Research and Quality is sponsoring an evidence review comparing endovascular repair of AAA that is expected to be published next year. The technique has been shown to have short-term benefits, compared with open surgical repair. The long-term effectiveness and complications of endovascular repair of AAA are not known. ■

**'Evidence now exists that screening high-risk men for abdominal aortic aneurysms can reduce deaths from aneurysm.'**