Surveillance Program Needed to Track VTE

VITALS

Major Finding: Available information on the burden of VTE has been based on two epidemiologic studies and on limited data from hospital discharge surveys or analysis of provider claims databases.

Data Source: A workshop and a review of the literature by a national work group convened by the Centers for Disease Control and Prevention and the American Society of Hematology.

Disclosures: Dr. Raskob disclosed that he has received consulting fees from Bayer, Bristol-Myers Squibb, Boehringer Ingelheim, Pfizer, GlaxoSmithKline, Johnson & Johnson, Daiichi Sankyo, Sanofi-Aventis, and Takeda.

BY MICHELE G. SULLIVAN

FROM THE AMERICAN JOURNAL OF PREVENTIVE MEDICINE

There is no shortage of clinical guidelines describing the risk factors for deep vein thrombosis and pulmonary embolism and how to effectively treat and prevent them.

What is lacking, a national work group has concluded, is any way to track whether those guidelines are being implemented.

Also missing is information about how such guidelines might affect the incidence of venous thromboembolism (VTE). These questions can be answered only through collection of data by a national surveillance program, according to Gary E. Raskob, Ph.D., and his colleagues.

The work group, convened by the Centers for Disease Control and Prevention and the American Society of Hematology, consisted of physicians, epidemiologists, and health care policy experts. Following a 1-day workshop, the group summarized the literature on the clinical impact of deep vein thrombosis (DVT) and pulmonary embolism (PE) in several areas of medicine, wrote Dr. Raskob, of the University of Oklahoma Health Sciences Center, Oklahoma City, and his coauthors (Am. J. Prev. Med. 2010; 38:S502-9).

The available information on the clinical and economic burden of VTE "has been based on two population-based epidemiologic studies and on limited data from hospital discharge surveys or analysis of healthcare provider claims databases," the work group wrote.

Each year, about 900,000 cases of VTE occur in the United States. The risk of VTE increases with age, and is somewhat higher for men than for women (114 vs. 105/100,000). There are few data on whether DVT incidence varies by ethnic group, and available studies vary widely in methodology and conclusions.

A California patient discharge review that spanned 1991-1994 found an annual incidence among whites of 230/1 million population, compared with 293/1 million for blacks, 139/1 million for Hispanics, and 60/1 million for Asian/Pacific Islanders.

Most VTEs are associated with a recent hospitalization; therefore, the work group said, hospitalization is an opportune time to institute prevention measures and to educate patients on the risks of blood clots.

Among its recommendations, the work group suggested that the CDC:

- Establish a demographic picture of DVT and PE in the United States.
- Determine whether there are incidence differences among minorities, compared with white populations.
- Further define risk factors among various patient groups (pregnant patients, surgical patients, children, residents of long-term care facilities, and patients with a family history of VTE).
- Evaluate whether evidence-based preventive measures are being appropriately applied.
- Detect changes in the incidence of DVT and PE and relate these changes to any increase in the use of preventive measures.

The group also recommended that the CDC initiate a two-pronged national public awareness campaign, focusing on increasing overall understanding of the disorder and its risk factors, and encouraging patients who are about to undergo surgery or hospitalization to discuss the subject with their physicians. ■

MY TAKE

Stop Underestimating VTE Risk

It's time for physicians and the public to take an in-depth look at this issue. Although at least four clinical treatment and prevention guidelines are available, they are not always employed in practice. We all know that everyone in the hospital should be receiving VTE prophylaxis, for example. Unfortunately, not everyone is getting it.

Several factors probably contribute to the problem. In some cases, we simply forget about VTE prevention. When a physician is dealing with acute problems in a very sick patient, VTE prevention might not be the first thing on that doctor's mind. Also, there are physicians who simply are not aware of the prevention guidelines, and so they don't implement them.

Finally, physicians who see discharged patients in the community—where 75% of VTEs occur—might not appreciate the importance of continuing prophylaxis after discharge. Physicians who don't provide care for patients in the hospital can go for years without seeing a clot, so they may underestimate the magnitude of the problem.

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St. John's Wort Enhances Patients' Response to Clopidogrel

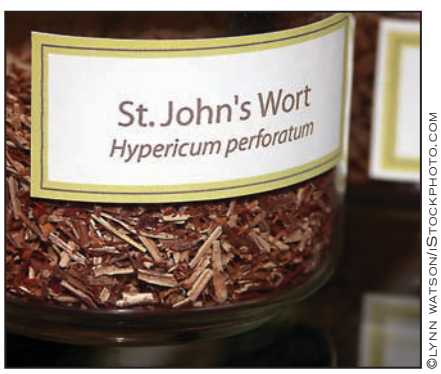
BY BRUCE JANCIN

FROM THE ANNUAL MEETING OF THE AMERICAN COLLEGE OF CARDIOLOGY

ATLANTA — St. John's wort appears to convert clopidogrel hyporesponders into robust responders.

This raises the intriguing possibility that the herbal therapy might provide a "twofer": enhanced platelet inhibition in clopidogrel (Plavix) hyporesponders, plus a well-studied antidepressant effect that could be of particular value in patients with coronary artery disease, Dr. Wei C. Lau said at the meeting.

"Depression plays a big role in coronary artery disease, and addressing depression is a big part of our cardiac rehab program. The next step in our research is going to be St. John's wort versus placebo to see if we get a double whammy: a treatment that improves platelet inhibition in patients on clopidogrel while also improving the psyche," added Dr. Lau, director of adult cardiovascular and thoracic anesthesiology at the University of Michigan Cardiovascular Center, Ann Arbor.



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St. John's Wort may boost clopidogrel efficacy as well as treat depression.

It's now well established that about 20% of clopidogrel-treated patients are low responders to the platelet-inhibiting drug, placing them at increased risk of major thrombotic events related to coronary stenting.

The recommended solutions at this point are to double the maintenance dose from 75 to 150 mg/day, switch to an alternative platelet inhibitor, or add another agent such as cilostazol (Pletal). But doubling the clopidogrel dose raises the associated bleeding risk, while cilostazol is a relatively expensive drug with compliance issues related to its twice daily dosing.

"I think we can do this better with St. John's wort," according to Dr. Lau. "It's a dollar a pill once daily."

Clopidogrel is a prodrug activated by the cytochrome P450 isoenzyme. St. John's wort (*Hypericum perforatum*) is a potent inducer of increased metabolic activity of the CYP 3A4 enzyme, with resultant enhanced platelet-inhibiting effects.

Dr. Lau and his coinvestigators, including Dr. Paul A. Gurbel of Johns Hopkins University, Baltimore, measured platelet function in 62 heart patients on chronic maintenance clopidogrel at the standard 75 mg once daily. They identified 19 patients as clopidogrel hyporesponders with suboptimal platelet inhibition. They randomized these 19 patients in double-blind fashion to St. John's wort at 300 mg once daily or placebo for 14 days while continuing on clopidogrel, then repeated the platelet aggregation studies.

Platelet inhibition improved by 20% in the St. John's wort group while remaining unchanged in controls.

St. John's wort's effects on the cytochrome P450 isoenzyme could in theory affect the metabolism of certain other drugs commonly prescribed in patients with coronary disease. Dr. Lau said that he and his colleagues have demonstrated that, reassuringly, the herbal therapy does not affect LDL levels in patients on statins. However, further prospective randomized studies are clearly needed to firmly establish the safety and efficacy of St. John's wort in converting clopidogrel nonresponders to responders, he added.

'I think we can [boost platelet inhibition] better with St. John's wort.'

DR. LAU

In an interview, Dr. Lau said he has found, as have others, that concentrations of the active agent often are not as labeled and vary widely from batch to batch with some manufacturers. He has settled on the German Kira brand for its consistency. ■

Disclosures: *Dr. Lau disclosed having no financial interests relevant to this study.*