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HOW MUCH IS TOO MUCH?

Screening for malignancy in patients with unprovoked venous thromboembolism

By Gary H. Dworkin, MD RPVI

Unprovoked venous thromboembolism (VTE) is a fairly common patient presentation and can account for as much as 40% of all VTE cases. This includes all DVTs or pulmonary embolisms that occur without a clear provocation, such as major surgery, trauma, paralysis, pregnancy or confinement to bed for three or more days.

Up until recently, I believed that there was a 10 percent chance of discovering occult cancer in these unprovoked venous thromboembolism patients. And, if we found an early malignancy, perhaps we could cure the patient.

We have accepted, since 1860, that Trousseau Syndrome or migratory superficial thrombophlebitis is recognized as a harbinger of occult lung or pancreatic cancer. But other questions persist:

- How common is occult cancer in the unprovoked VTE patient?
- What are the typical malignancies discovered during such a work up?
- How hard should we look for them?
- Do our efforts searching for an occult malignancy make a difference in life expectancy?

Well, I think we are pretty close to the answer.

Published less than a year ago in the *NEJM* (NEJM 2015;373:697-704), a large Canadian study randomized unprovoked VTE patients to undergo limited screening with blood work; CXR; and breast, pelvic or prostate exams.

A second identical group of unprovoked VTE patients underwent the same limited screening, but with the addition of a comprehensive CT of the abdomen and pelvis.

From the time of randomization to one year of follow up, 3.2% of patients in the limited screening group and 4.5% in the limited screening+CT group had a new diagnosis of occult cancer, (P=0.28). Cancer related mortality at one year was also not different between study groups (1.4% and 0.9%, P=0.75).

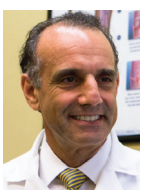
Each study group had an initial false-negative diagnostic rate of about 25%. In other words, in both groups, about 25% of the patients who were found to have an occult cancer were not discovered to have that cancer during the initial screening, yet did have a cancer subsequently diagnosed within the first year of the study.

Also, there was no difference between the two exam groups in the mean time to a cancer diagnosis (4.2 months in the limited screening group and 4.0 months in the screening + CT group, P=0.88).

Finally, the types of cancers discovered over the one-year study were not significantly different between exam groups though a trend towards more colorectal cancers being discovered in the limited screening + CT group was seen. This trend was possibly due to the use of virtual CT colonoscopy image protocols. Finally, despite omitting a chest CT as a component of the screening + CT evaluation group, no occult lung cancers were diagnosed in either group initially or during follow up.

In summary, for patients who have a first unprovoked venous thromboembolism, the prevalence of occult cancer seems lower than previously reported.

Routine screening for malignancy using CT of the abdomen and pelvis in these patients does not provide significant benefit. Limited age-appropriate screening in these cases likely maximizes healthcare value and lowers costs. **VTN**



Gary H. Dworkin, MD RPVI *is a board certified cardiovascular and thoracic surgeon; a Diplomat of the American Board of Thoracic Surgery; and a member of the American College of Phlebology and the American Venous Forum. He is also a past-president of the Florida Society of Thoracic and Cardiovascular Surgeons; and immediate past-president of the Cleveland Clinic Alumni Association. He practiced cardiovascular and thoracic surgery for more than 18 years, but today, Dr. Dworkin dedicates his medical career to the treatment of venous disease at Vein Specialists of Tampa (tampaveinspecialists.com).*