



LETTER TO EDITOR

Thrombophilia Testing: A Quality Improvement Measure

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Received: Jul 11, 2017

Accepted: Aug 29, 2017

Published: 05 Oct, 2017

Conflicts of interest: None

Funding: None

*Key words: Thrombophilia, Venous Thrombosis, Quality Improvement**Dear Editor*

Quality improvement is the mainstay of the modern healthcare system, having the goals of improving quality of care and ensuring patient safety (1). An interesting and current topic in the quality improvement field is thrombophilia testing for venous thromboembolic events (VTEs). VTE is classified into provoked and unprovoked types. Provoked VTE, especially in some younger patients, can lead clinicians to test for thrombophilia, to hopefully prevent future VTE episodes (2). However, if done inappropriately, this testing can put a significant burden on healthcare systems.

At the University of Toledo Medical Center, we conducted a retrospective analysis of patients with documented VTE, to evaluate the appropriateness of thrombophilia testing and its effect on management (3,4). We divided patients into two groups: low risk (first provoked VTE or upper extremity VTE) and high risk (first unprovoked VTE, two or more episodes of VTE, age < 45 years, positive family history of VTE, unusual location, and arterial thrombosis). Approximately 41% of patients were assessed as low risk

and 59% were assessed as high risk. Based on our interim data analysis, we found that thrombophilia testing was done on a relatively small subset of low risk (6.8%) and high risk (22.7%) patients, which was very encouraging. At our center, the cost of testing for hereditary thrombophilia was \$6,172 per patient. Even in the high-risk group, in more than half of patients who were tested for thrombophilia, testing did not change the management.

Based on current evidence and on the fact that thrombophilia testing rarely changes the management plan (even for high-risk patients), I think the testing is being overused. High-risk patients have enough high-risk indicators to justify continuation of anticoagulation regardless of thrombophilia testing results. The cost of thrombophilia testing is extremely high without, in most circumstances, having a significant effect on patient care.

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