



Response Report for Review and Comment – February 2010

Venous Thromboembolism Diagnosis and Treatment

Member Groups Requesting Changes:

Marshfield Clinic
Smiley's Clinic – University of Minnesota Physicians

Member Groups that Reviewed the Guideline, No Changes Requested:

Mayo Clinic
CentraCare Clinic

Member Groups that Responded but the Guideline Does Not Pertain to Practice:

None

Sponsoring Health Plans Requesting Changes:

None

Sponsoring Health Plans that Reviewed the Guideline, No Changes Requested:

UCare

GENERAL COMMENTS:

- 1) The VTE guideline will be used as a resource for physicians and providers. Very good Protocol. Having all the diagnostic criteria available in algorithmic form is appreciated. (Marshfield Clinic)

Thank you for the comment.

- 2) This guideline has been used as a resource in our organization.

To review this specific guideline, we had 2 clinics separately evaluate the guideline. They reviewed the guideline and presented within their clinics. Recommendations and concerns were forwarded to the Clinic Medical Directors Meeting. The Medical Directors met and combined input from the clinics.

One clinic reviewed the guideline through a Morbidity and Mortality conference about a patient with severe pulmonary embolism and subsequent right heart failure. They used the guideline retrospectively as a learning tool to review the quality of care, look for

systems improvements which they could make, and also as a way to critique the clinical usefulness of the guidelines. The other clinic used its inpatient team to review and discuss the guideline.

Overall our opinion was that the medical knowledge and clinical reasoning in the guideline was excellent and very helpful. In general, it is a good tool in the initial evaluation and management of the routine VTE. The annotations provide useful information in a succinct fashion. However, some important information is buried in the annotations and is not as accessible as desired (see below).

The following sections of the guideline or issues presented barriers in implementation of the guideline:

1. One criticism of the clinical thinking was how to incorporate the D-dimer test. It appears that the guideline would have one obtain the test but then in some scenarios not use the result – this appeared to be confusing.

Thank you for your comment. D-dimer testing is used in combination with pretest probability to help determine the appropriate sequence of action to be taken in patients with a suspected DVT or PE. In patients with a low clinical pretest probability, a negative d-dimer can be used to avert initial testing. In patients with moderate or high pretest probability, a negative d-dimer can be used to avert the need for follow up or confirmatory testing. A positive D-dimer can be used to prompt a provider to pursue the diagnosis of VTE when tests are equivocal. We will continue to revise our algorithms to best fit the usefulness of this and other tests in the workup of VTE based on the evidence from the literature.

2. The largest difficulty with the guideline was that it is difficult to use. There is a lot of needed useful information in the annotations that is not readily apparent from the abbreviated annotation. In order to use the guideline you essentially have to read the whole guideline first with the annotations which does not make it accessible for clinical care.

Thank you for your feedback. The annotations are a tool to explain and provide more information for the algorithm. The algorithm is designed to provide a step-by-step guide for the process and the individual annotations supplement the steps.

3. We noted several practical difficulties as follows:

A. PE Diagnosis algorithm box #15: Titled “Clinically stable?” This was felt to be misleading since our clinicians assumed this meant a clinical assessment only using history/exam/vital signs. In fact this branch in the algorithm takes into account results of studies such as echocardiogram, V/Q scan, CT scan, and right heart catheterization. At this point in the guideline there has been no guidance on which patients would need these studies in the first place.

Thank you for your comment. Language defining clinically unstable (hypotension, acute respiratory failure) patient was added to box #15 and the section referring to the studies was removed.

B. Treatment algorithm box #44: Titled “Other therapies”. This is actually the annotation reference that brings you to important guidance on using fibrinolytics and Greenfield filters. Again, we felt that information about which patients would need fibrinolytics and/or filters needs to be much more apparent in the algorithm and not buried in an annotation with a vague title.

Thank you for your comment. A listing of the other therapies has been added at the top of the annotation.

C. The last difficulty we encountered was ambiguity of the algorithm in reference to anticoagulation choices. It was difficult in the current guidelines to follow which patients could and should be treated with heparin drips and which should be treated with low-molecular weight heparin. In most of the places it is discussed, the guideline appears to give you a choice without necessarily guiding the clinician in any way. A clinical highlight/recommendation on page 6 states “Achieve rapid anticoagulation with LMWH/fondaparinux,” yet the treatment algorithm (box #35) provides the reader with no guidance regarding UFH vs. LMWH/fondaparinux. It is subsequently discussed in the annotation #35, but the preference of LMWH/fondaparinux over UFH could be stressed more clearly in the treatment. Again, this is a common decision that needs to be made (UFH vs LMWH) and it would be appreciated if the guideline helped with this more clearly and succinctly. (Smiley’s clinic – UM Physicians)

Thank you for your comment. Due to significant variation from institution to institution of which antithrombotics are used, please refer to the anti-thrombotic therapy supplement.

MEDICAL CONTENT:

- 3) Annotation #36, page 25 Warfarin: Key point # 4 states that heparin should be continued for at least 4 days. This is also mentioned in the clinical highlights and recommendations on page 5, bullet #7.

According to the CHEST supplement, the current recommended approach is to start both heparin and VKA at the time of diagnosis and to discontinue heparin after **5** days provided the INR is greater than or equal to 2.0 for at least 24H. This recommendation is based on two randomized controlled trials, which are listed in the reference column.

Can the work group clarify the variation from the CHEST recommendation??

References: Antithrombotic Therapy for Venous Thromboembolic Disease. *CHEST* 2008; 133: 454S-545S. *Supplement section 463S.*

Gallus AS, Jackaman J, Tillett J, et al. Safety and efficacy of warfarin started early after submassive venous thrombosis or pulmonary embolism. *Lancet* 1986; 2:1293–1296.

Hull RD, Raskob GE, Rosenbloom D, et al. Heparin for 5 days as compared with 10 days in the initial treatment of proximal venous thrombosis. *N Engl J Med* 1990; 322:1260–1264 (Marshfield Clinic)

Thank you for your valuable feedback. The work group changed the recommendation from four to five days.

PRIORITY AIMS AND SUGGESTED MEASURES:

None

SUPPORT FOR IMPLEMENTATION:

None