Maine Medical Center
Department emergency medicine

Journal club summary
November 20, 2013

Article selection in moderator Sonny Sledge M.D.

Summary Mark Earnshaw,MD

Topics
Focus of this Journal club is to review outpatient treatment of pulmonary embolus.
Understanding screening criteria that would allow outpatient treatment
Review CDU criteria for low risk PE treatment

Particles reviewed

Outpatient treatment in patients with acute pulmonary embolism : Hestia study
journal of Thrombosis and Hemostasis 2011  p 1500-7

Outpatient versus inpatient treatment for patients with acute pulmonary embolism:
International, open labile, randomized, non-inferiority trial
Lancet July 2, 2011 volume 378 page 41-48

Is it time for home treatment of pulmonary embolism?
European respiratory Journal 2012; 40; 742-749

Outpatient versus inpatient treatment in patients with pulmonary embolism and
metaanalysis
European respiratory Journal 2013; 42; 134

Teaching points

Outpatient treatment for venous thrombotic disease has led to investigation of pulmonary emboli outpatient treatment

Several European countries now routinely treat low risk PE with early discharge and home treatment using standard low molecular weight heparin and warfarin.

Pulmonary embolism severity index score PESI both full and simplified version have been validated but are heavily weighted by age and history of cancer.

Attempt to define a low risk PE using clinical scores, imaging and laboratory biomarkers does not have randomized trials and consensus agreement only.
Poor standardization of echo cardio graphic criteria and CT PA have made these modalities difficult to study: there is no agreement on use for low risk PE.

Biomarkers including troponin and BNP as well as high sensitivity troponin have been used but there is no level I evidence. Ongoing studies were forthcoming.

Primary outcome measures in the studies used major bleeding recurrent VT E. and overall mortality. There is no statistical difference between inpatient and outpatient in single non-inferiority trial. Inclusion criteria used PESI score.

See enclosed non-high risk pulmonary embolism algorithm for outpatient/CDU treatment. Many thanks for Dr. Sam Wood for this pathway

Another option for outpatient treatment is rivaroxiban. Oral treatment does not require monitoring and is low-cost when compared with warfarin and low molecular weight heparin. Only studies to date are sponsored by manufacture.