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Inside this issue: APSR Respiratory VTE Update

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Deep vein thrombosis and pulmonary embolism.

Di Nisio et al.
Lancet. 2016; 388:3060-3073
http://www.sciencedirect.com/science/article/pii/S0140673616305141

Comments: This review succinctly outlines the diagnosis, investigation and management of acute deep vein thrombosis and pulmonary embolism.

Bottom line: A very helpful guide for clinicians managing patients with venous thromboembolism.

Antithrombotic Therapy for VTE disease: CHEST Guideline and Expert Panel report.

Kearon et al.
CHEST 2016;149(2):315-352
http://www.sciencedirect.com/science/article/pii/S0012369215003359

Comments: Over the last 30 years leading international experts in antithrombotic therapy have issued and updated guidelines for antithrombotic therapy in VTE disease. In this 10th edition, the expert panel update recommendations on 12 topics previously covered, and report on three new topics. Key changes in these guidelines include the use of non-vitamin K oral anticoagulants in preference to warfarin for short and long term treatment of VTE patients without cancer, the removal of the recommendation to routinely prescribe compression stockings to prevent post-thrombotic syndrome in acute DVT and recommendations about which patients with isolated subsegmental PEs should receive anticoagulation therapy and which of these patients may be placed on surveillance.

Bottom line: Keep up to date with the management of specific patient groups by referring to these guidelines.

Prevalence of pulmonary embolism among patients hospitalized for syncope.

Prandoni et al.
New England Journal of Medicine. 2016; 375(16): 1524-31.
http://www.nejm.org/doi/full/10.1056/NEJMoa1602172

Comments: In this Italian study, the investigators examined the frequency of pulmonary embolism in 560 patients admitted to hospital with their first episode of syncope. PE was initially ruled out using the Wells score and a D-dimer, while in remaining patients computed tomographic pulmonary angiography or a ventilation perfusion scan was done. Of 560 patients, 330 had a low Wells core and a negative D-dimer. Pulmonary embolism was found in 97 (42.2%) of the remaining 230 patients. Of the 355 patients who had an alternative explanation for syncope, 45 (12.7%) were found to have PE, compared to 52 (25.4%) of the 205 patients who did not.

Bottom line: Pulmonary embolism should be considered in all patients hospitalized for a first episode of syncope, regardless of an alternative explanation for the syncope.

A new prognostic strategy for adult patients with acute pulmonary embolism eligible for outpatient therapy.

Angriman et al.
J Throm Thrombolysis 2016; DOI 10.1007/s11239-016-1451-3
http://link.springer.com/article/10.1007%2Fs11239-016-1451-3

AND

Pathways for outpatient management of venous thromboembolism in a UK centre.

Condliffe
Thrombosis Journal 2016; 14:47: DOI 10.1186/s12959-016-0120-2
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5137218/

Comments: Crucial questions remain around identifying patients with PE who can safely be treated as an outpatient, and utilizing a pathway for VTE management that includes the patient, and primary and secondary healthcare providers.

Angriman et al describe a retrospective review of if 1,143 patients presenting to Ottawa Hospital, Canada, with acute PE between 2007 and 2012. Using a series of validation models, the authors have developed a simplified scoring system that can identify patients with PE at a very low risk of a clinically important adverse event (all-cause mortality, recurrent VTE, or major bleeding) in the first 14 days of follow up. The score, made at the time of diagnosis, includes five components, each scoring one point; active or prior cancer, hypotension, age >65 years, requirement for intravenous therapy of any sort, requirement for oxygen therapy. A combined score of one or less identifies patients with a <1% risk of adverse outcomes at 14 days. This score will require external validation prior to being adopted into clinical practice.

Condliffe et al describe the VTE pathway currently in use at Sheffield Teaching hospitals in the UK. In this pathway, there are distinct steps described in the process; patient presentation, diagnosis of VTE, patient risk stratification including an assessment of inpatient or outpatient management, development of a treatment strategy, and follow up. The pathway is run by a thrombosis clinic during usual working hours, and is initiated by emergency staff outside of normal working hours and then handed over to the thrombosis clinic. For simplicity, rivaroxaban is used in the management of all DVT cases and for all low risk PE cases unless contraindicated. There are pre-specified follow-up plans for all VTE patients with specialist nurse-led education and assessment sessions and consultant-led haematology / respiratory clinic as indicated. The expectation is that this pathway will lead to a reduction in hospital admissions, reduced length of stay, and a better patient experience.

Bottom line: It may be possible to use scoring systems to identify low risk PE patients for outpatient management. The use of pathways in the care of VTE patients may lead to safe and effective outpatient management of DVT and some PE patients.

Prediction of bleeding events in patients with venous thromboembolism on stable anticoagulation treatment.

Klok et al.
Eur Respir J 2016;48;1369-1376. DOI 10.1183/13993003.00280-2016
http://erj.ersjournals.com/content/48/5/1369.long

AND

Clinical impact and course of major bleeding with rivaroxaban and vitamin K antagonists.

Eerenberg et al.
Journal of Thrombosis and Haemostasis. 2015;13;1590-1596. DOI: 10.1111/jth.13051
http://onlinelibrary.wiley.com/doi/10.1111/jth.13051/epdf

Comments: One of the important considerations in continuing long-term anticoagulation therapy in VTE patients is the risk of bleeding. Bleeding risk scores for anticoagulation treatment in atrial fibrillation have low accuracy in the VE setting, so a VTE-specific bleeding risk score is indicated. Klok and colleagues describe the VTE-BLEED score, comprising 6 variables: active cancer, male patient with uncontrolled hypertension, anaemia, history of bleeding, age ≥ 60 years and renal dysfunction. The VTE-BLEED SCORE was derived from two large randomised controlled trials of dabigatran versus standard treatment in VTE patients. The VTE-Bleed score accurately predicted major bleeding events after 30 days on stable anticoagulation with both dabigatran and warfarin.

The EINSTEIN studies have shown that rivaroxaban is a safe and effective treatment for VTE in comparison to low molecular weight heparin and vitamin K antagonists (LMWH/VKA). Using data from the EINSTEIN studies, Eerenberg and colleagues show that not only is the rate of bleeding events lower with rivaroxaban compared to LMWH/VKA, but that bleeding events on rivaroxaban had a milder presentation, and there were fewer 'severe' cases with rivaroxaban.

Bottom line: VTE specific bleeding risk scores may help identify patients at higher risk of bleeding events with anticoagulation. Compared to LMWH/ VKA, rivaroxaban bleeding events have a milder presentation and are less likely to have a severe clinical course.

Cohort study on the management of cancer-associated venous thromboembolism aimed at the safety of stopping anticoagulation therapy in patients cured from cancer.

Van der Hulle et al.
Chest. 201631; 149(5): 1245-51.
http://www.sciencedirect.com/science/article/pii/S0012369215001646

Comments: In many instances the cause, investigation and management of VTE is not always straightforward. The three articles above highlight some of the less usual issues that clinicians may come across in their practice.

van der Hulle and colleagues followed 358 patients who were diagnosed with cancer associated VTE in order to examine the safety of stopping anticoagulation treatment after cancer is cured. In 219 patients anticoagulation continued until death (n= 207), or for other indications (n=12), while 71 patients had anticoagulation stopped due to major haemorrhage (n=21) or for reasons other than haemorrhage despite active cancer (n=50). In the remaining 68 patients anticoagulation was stopped after cancer cure. Those 68 patients were followed up for 311 person-years, and 10 suffered recurrent VTE (incidence rate 3.2 per 100 person years). Seven of these 10 patients were diagnosed with cancer relapse. The VTE incidence rate in the 50 patients that stopped anticoagulation despite active cancer was 19 per 100 person-years). The study team concluded that stopping anticoagulation treatment in patients diagnosed with cancer-related VTE after cancer cure is reasonable, and that cancer relapse appears to be a strong risk factor for recurrent VTE in this clinical context.

Bottom line: It is reasonable to stop anticoagulation for patients with cancer-associated VTE after cancer cure. Look hard for cancer relapse if this patient group presents with a recurrent VTE!

Testosterone treatment and risk of venous thromboembolism: population based case-control study.

Martinez, et al.
BMJ Open. 2016;355:i5968. DOI: 10.1136/bmj.i5968
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5130924/

Comments: Martinez and colleagues report from a case control study that testosterone treatment in men is associated with a 25% increased risk of VTE compared to no treatment, with the risk highest in the first 6 months of treatment.

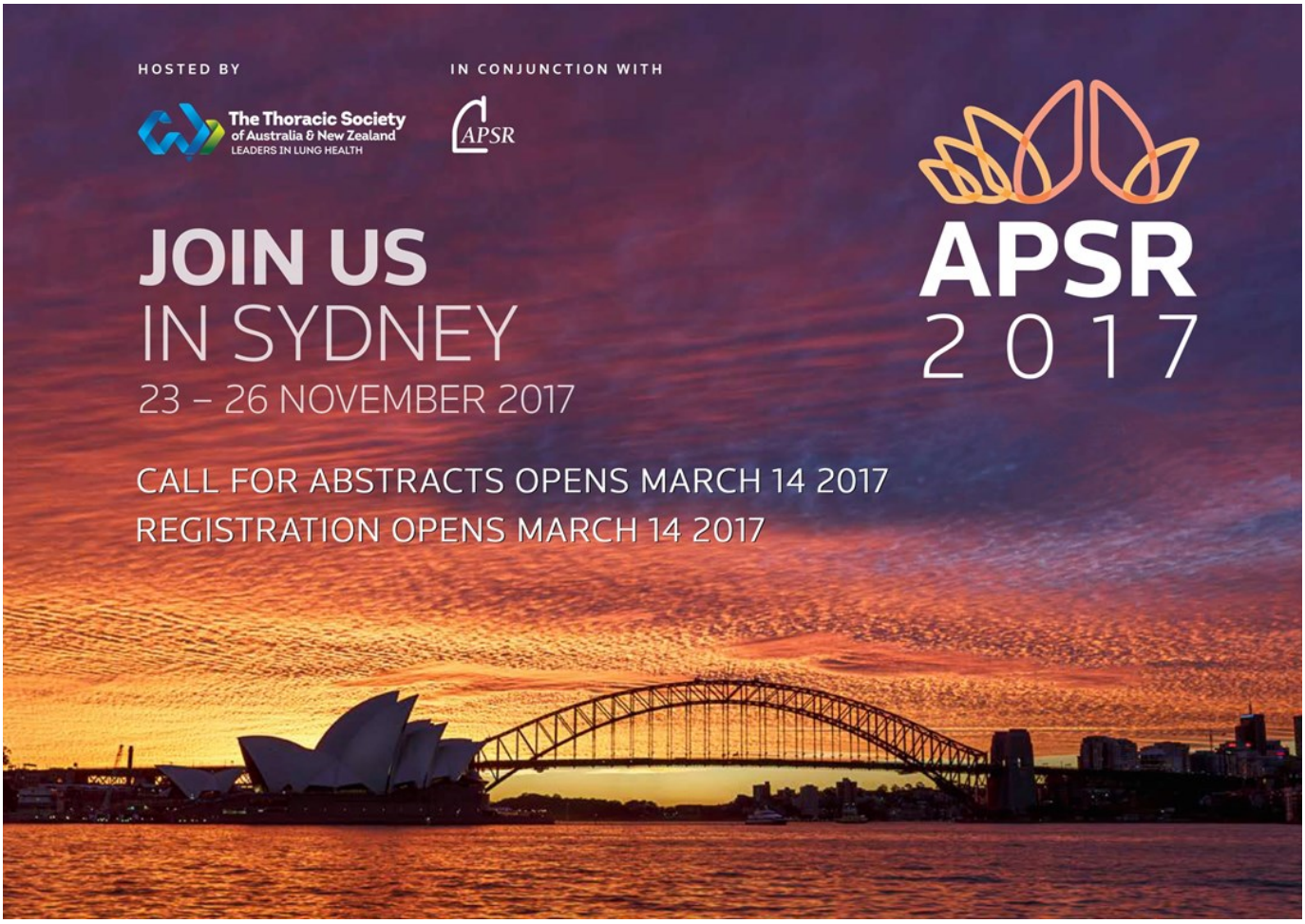
Factors that predict thrombosis in relatives of patients with venous thromboembolism.

Couturaud et al.

Blood. 2014; 124:224-2130.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4186541/

Comments: It is not uncommon for the first-degree relative of a VTE patient to ask about their own risk of VTE. While the risk of thrombophilias is now quite well understood, other possible risk factors are not. In this study Couturaud and colleagues found that a first degree relative had a higher risk of VTE themselves if their relative had a VTE at a young age, if the VTE was deemed unprovoked and if an additional family member had also had a VTE.a



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