VTE TREATMENT

CLINICAL GUIDELINE: Perioperative Anticoagulation March 2016

Triad Healthcare Network and Cone Health partners have worked to gather and share evidence based guidelines to improve the everyday management of VTE. This document is intended to support providers in decision making for pre and post procedure anticoagulation for patients 18 and over.

These guidelines apply to common clinical circumstances and may not be appropriate for certain patients and situations. The treating clinician must use judgement in applying guidelines to the care of individual patients.

VTE Treatment: Perioperative Anticoagulation				
Clotting Risk of Patient	Bleeding Risk of Procedure	Patient and Procedure Examples:	Pre-procedure	Post-procedure
Very Low	Very Low	dental cleaning; simple dental extraction, punch biopsy of skin; cataract extraction	No need for stopping anticoagulation in most instances. *If patient taking warfarin, check PT/INR 1-2 days prior to procedure to makes sure level not subtherapeutic*	
Low	Low	upper endoscopy; colonoscopy without biopsy; arthroscopy; non-valvular atrial fibrillation with low **CHADS2** score & no prior thrombotic events	Stop: Warfarin: 5 days prior to procedure; Dabigatran: **2 days (Ccr >/=80) - 3days(Ccr 50-79)* prior to procedure * ; Xa inhibitors 3days* prior**	Resume Warfarin or TSOC: night of procedure. No lovenox bridge if on warfarin
High**	Low**	thrombotic event within 6 months of procedure; homozygous factor V Leiden or Prothrombin gene mutations and prior embolic event; antiphospholipid antibody syndrome; mechanical mitral valve; atrial fibrillation with high **CHADS2** score or previous embolic event	Warfarin: stop for 5 days before procedure. Begin lovenox bridge 3 days before procedure; decrease to single 1 mg/kg dose 24 hours before procedure. (dose of lovenox 1.5 mg/kg/day except decrease to 1 mg/kg day before procedure.) TSOC: stop Dabigitran **2-3 days** before, Rivaroxaban, Apixaban, Edoxaban **2 day**s before*	Resume Warfarin or TSOC: night of procedure. Lovenox bridge: begin 24 hours after procedure if patient on warfarin; continue until warfarin therapeutic.
Low	High	Neurosurgical or spinal procedures, joint replacement; prostratectomy; no prior thrombotic events	Hold 5 days for warfarin; **3days** for TSOC*	**Resume warfarin and TSOC 48-72 hours post op if patient otherwise stable after consultation with surgeon. If use lovenox bridge for warfarin patients to begin day warfarin resumed and continued until warfarin therapeutic.**
High **	High **	see examples above for high clotting risk patients and high bleeding risk procedures	Stop warfarin 5 days prior to procedure. Lovenox bridge start 72 hours before procedure for full dose; decrease to 1mg/kg dose 24 hours pre-op. For TSOC: **stop 2-3 days** before procedure for dabigatran; **3 days*** for Xa inhibitors.*	Resume **warfarin or TSOC** 48-72 hours post procedure if stable. **For lovenox bridge for warfarin patients to begin day warfarin resumed and continued until warfarin therapeutic.**

Notes:

*Check renal function: may need to hold longer for TSOCs- especially dabigatran

** Strongly consider pre-operative Specialty consultation: Hematology, Cardiology, or Pulmonary Critical Care Medicine

*** Consider collaboration with Anesthesia before placing patient on preoperative LMWH or Heparin SQ

For detailed stratification of clotting risk and bleeding risks for patient subsets and various procedures, see NCCN guidelines 2015: CHEST guidelines 2015; Cardiology Patient guidelines; J Thrombosis & Hemostasis 3/14/16 Spyropoulos AC et al

Some patients may need to be admitted to the hospital and transitioned to peri-operative unfractionated heparin; example DVT/PE occurring in 3rd trimester of pregnancy; patients with history of recurrent VTE or previous bleeding complications.

References:

Perioperative Management of Anticoagulation and Antithrombotic Therapy. NCCN Guidelines Version 1.2015. http://www.nccn.org/about/news/ebulletin/ebulletindetail.aspx?ebulletinid=629 Published August 11, 2015. Accessed 2/15/2016.

Kearon C, Akl E, Omelas J, et al. Antithrombotic Therapy for VTE Disease: CHEST Guideline and Expert Panel Report. *Chest.* 2016; 149(2): 315-352.