|  |
| --- |
| [Episode 30: Management of anticoagulation for non-valvular a-fib](http://accrac.com/episode-30-management-of-anticoagulation-for-non-valvular-a-fib/) |
| On this episode: Dr. Jed Wolpaw |
| In this episode, episode 30, I discuss the new American College of Cardiology Guidelines for the periprocedural management of anticoagulation for patients with non-valvular atrial fibrillation. This includes whether to stop, when to stop, whether to bridge, how to bridge, and how and when to restart. |
| |  |  |  |  | | --- | --- | --- | --- | | Table of Contents Hyperlinks to section of notes. | | | | | [What is atrial fibrillation? 2](#_Toc526680882)  [Who needs anticoagulation? 2](#_Toc526680883)  [When should it be interrupted? 2](#_Toc526680884)  [How to interrupt anticoagulation? 2](#_Toc526680885)  [When to bridge? 3](#_Toc526680886)  [How to bridge? 3](#_Toc526680887)  [When to restart? 3](#_Toc526680888)  [References 4](#_Toc526680889) | | | |  | |  What is atrial fibrillation?  * Most common sustained arrhythmia, increases with age. 1 in 4 have in lifetime.  Who needs anticoagulation?  * Anticoagulation recommended for most because of stroke and systemic embolus. * Oral anticoagulation > antiplatelet for CHADS-VASc score ≥2   + CHF (1)   + HTN (1)   + Age ≥ 75 (2)   + Diabetes (1)   + Stroke/TIA /thromboembolism (2)   + Vascular disease (1)   + Age 65-75 (1)   + Sex F (1) * Absence of rheumatic MS, mech/bio valve, or repair. Some say moderate to severe MR = valvular (gray area) * Vitamin K antagonist – coumadin * Direct oral anticoagulant – rivaroxaban, apixaban, edoxaban, dabigatran  When should it be interrupted?  * Weigh risk of bleed (HAS-BLED) vs clot   + HAS-BLED: ≥3 predictive of bleeding events     - HTN     - Abnormal renal/liver function     - Stroke (prior)     - Bleed predisposition/anemia     - Labile INR/vitKantag     - Elderly ≥ 65     - Drug (antiplatelet, NSAID , heavy EtOH, illicit drugs) * Prior bleed or past 3 months, abnormal platelet, supratherapeutic INR, bleed history with prior bridge or similar procedure * Bruise control: coumadin vs temporary interruption/bridge (more bleed) * Compare   + If VKAT, and low HASBLED/low risk bleeding procedure, don’t stop   + If intermediate to high risk of bleed OR uncertain, AND bleed risk, then stop VKAT   + If low risk surgery, and some risk factors, or uncertain surgery with no risk factors, use clinical judgement * Draw INR 5-7 days before to identify supratherapeutic (>3).  How to interrupt anticoagulation?  * Coumadin   + If subtherapeutic, stop 3-4 days before   + If therapeutic, stop 5 days before   + If INR >3, stop more than 5 days before * DOAC has shorter half-life, so stop sooner. Depends on renal function. * Reversal for dabigatran   + Idarucizumab   + ESRD – not lot of data. Check dilute thrombin time for dabigatran * Agent specific chromogenic anti factor 10a activity * Low risk, no risk factor, don’t stop. Daily trough and procedure during trough. * Look at creatinine clearance and refer to chart if you do need to stop  When to bridge?  * DOAC doesn’t need bridging because short acting. Use CHAD-VASc to determine need. * ≤4 and no history of prior stroke/ TIA: <5% thrombotic risk / year – don’t need bridge. Not validated * 5-6 or prior history AND   + if increase risk bleeding, don’t bridge.   + If not increase risk bleeding, AND     - No history, don’t bridge.     - Prior history, bridge! * 7-9 or recent stroke: bridge  How to bridge?  * LMWH vs heparin drip   + LMWH decreased length of stay   + Heparin drip longer acting, less concern for renal function * History of heparin-induced thrombocytopenia: use non-heparin products like bivalirudin * Heparin can be discontinued 4-6 hours prior to procedure * Lovenox can be discontinued 24 hours prior  When to restart?  * Make sure no ongoing bleeding. Patient specific factors * Warfarin first 24 hours because it takes 24-48 hours to take effect, and 5 days to fully work. * VKA linked to hepatic function and antibiotic use. Do you also need to start heparin because blocking Proteins C/S first? * Studies found highest risk is when INR becomes therapeutic, unless argatroban, which you’d stop at 3. Ask your lab * Restart full dose morning after procedure assuming low risk and no bleeding * High risk of bleed – wait 2-3 days * Based on dabigatran algorithm in RELY trial, 1.8% major bleed and 0.2% thromboembolic event * Rivaroxaban – need meal. This and apixaban can be crushed and put in tubes * During temporary pause, can use heparin or lower NOAC * Can’t use NOAC if epidural in place. Must wait 24 hours after removed per ASRA * After cardiac surgery, based on RE-ALIGN 2013, stopped early because more thrombotic events and bleeding in dabigtran vs warfarin. → all DOACS contraindicated in mechanical valves * On NOAC and if mechanical valve put in, transition to warfarin * If CABG, use NOAC   How do you bridge? What guidelines do you use? |
| References Please visit the reference for full details, algorithms, and more: [2017 ACC Expert Consensus Decision Pathway for Periprocedural Management of Anticoagulation in Patients With Nonvalvular Atrial Fibrillation](http://www.onlinejacc.org/content/early/2017/01/05/j.jacc.2016.11.024) |
| **Comments or suggestions?** Please email [accrac@accrac.com](mailto:accrac@accrac.com) or leave a comment on the [website](http://accrac.com/). **Fan of the show?** Please take a moment to leave a comment and a rating to help others find the show!  **Want to support the show?** [Patreon.com/ACCRAC](https://www.patreon.com/accrac) to become a patron and support the making of the show.  Notes by [Brian Park](https://twitter.com/ParkBrianH) |