

## BRINGING CLINICIANS TOGETHER TO DISCUSS CURRENT DRUG THERAPY

October 2019 • Vol. 16, No. 10

The following succinct analysis appeared in *Pharmacist's Letter*. Based on vol. 35. No. 10

---

### ANTICOAGULANTS

You'll face questions about how to manage direct oral anticoagulants (Eliquis, etc) around an elective procedure or surgery.

Direct oral anticoagulants (DOACs) kick in and wear off faster than warfarin...so they need to be managed differently around procedures.

Collaborate with prescribers...and consider these rules of thumb.

Explain it's okay to continue DOACs for many low-bleeding-risk procedures...such as cataract surgery, tooth extraction, or skin biopsy.

But in these cases, recommend delaying the DOAC the day of surgery...until about 4 to 6 hours after the procedure. This may mean skipping the morning dose altogether if the DOAC is dosed BID.

On the other hand, generally advise holding the DOAC 1 day before other low-bleeding-risk procedures, such as colonoscopy or upper endoscopy...since these may involve biopsy or polyp removal.

Suggest holding 2 days before procedures with high bleeding risk...such as major abdominal, orthopedic, or vascular surgery.

But also consider renal function. For example, suggest holding for 3 days prior if CrCl is below 30 mL/min...or up to 5 days with *Pradaxa* (dabigatran), which relies on renal clearance more than other DOACs.

Typically suggest restarting DOACs 1 day after a low-bleeding-risk procedure...or 2 to 3 days after other procedures or surgery.

Don't recommend "bridging" with an injectable anticoagulant (enoxaparin, etc) when a DOAC is held...since DOACs work quickly. Plus studies with warfarin suggest bridging often does more harm than good.

Expect elective procedures to be delayed if clot risk is high...such as patients with a venous thromboembolism within the past 3 months.

See our chart, *Perioperative Management of Chronic Meds*, for more advice on managing anticoagulants and other common meds.

(For more on this topic, see Clinical Resource #351003 at [PharmacistsLetter.com](http://PharmacistsLetter.com).)

Primary Reference – Douketis JD, Spyropoulos AC, Duncan J, et al. Perioperative management of patients with atrial fibrillation receiving a direct oral anticoagulant. *JAMA Intern Med* 2019 Aug 5. doi: 10.1001/jamainternmed.2019.2431. [Epub ahead of print].

See LEADER NOTES for answers to discussion questions.

## DISCUSSION QUESTIONS

### OVERVIEW OF CURRENT THERAPY

1. **What is known about managing patients on a direct oral anticoagulant (DOAC) who need to have a procedure?**
2. **What type of study was this? How were the patients selected for inclusion?**
3. **How were the study groups defined?**
4. **How were the outcomes evaluated?**

See [LEADER NOTES](#) for answers to discussion questions.

5. What were the outcomes of the cohort study?

6. What were the strengths and weaknesses of the cohort study?

7. Were the results expressed in terms we care about and can use?

HOW SHOULD THE NEW FINDINGS CHANGE CURRENT THERAPY?

8. Do the results change your practice? How?

APPLY THE NEW FINDINGS TO THE FOLLOWING CASE

PL is a 62-year-old male with a history of hypertension, non-valvular atrial fibrillation, and diabetes who presents to your office for routine follow-up. His medications include carvedilol 6.25 mg twice daily, lisinopril 20 mg daily, atorvastatin 80 mg nightly, metformin 1 g twice daily, and *Eliquis* (apixaban) 5 mg twice daily.

See LEADER NOTES for answers to discussion questions.

He's seen TV commercials from lawyers offering to represent patients who've had severe bleeding while taking *Eliquis*, and asks if he needs to continue taking it.

**9. How do you assess PL's individual embolic risk to determine the appropriate anticoagulation?**

You discuss PL's risk of stroke, and he agrees that he'd like to continue taking *Eliquis*.

A month later, PL calls and states that he is having a colonoscopy. The physician performing the colonoscopy requested that he contact you regarding what to do with his anticoagulation for the procedure.

**10. How do you counsel PL regarding managing his DOAC prior to and after his colonoscopy?**

You discuss when to stop and restart PL's anticoagulant and he expresses understanding. However, he asks if he will need to use *Lovenox* injections while he's off of *Eliquis*, like he had to do for procedures when he was taking warfarin.

**11. Should you recommend that PL “bridge” with an injectable anticoagulant?**

You explain that using an injectable anticoagulant isn't necessary when DOACs are stopped for procedures, since the onset of anticoagulant effects with DOACs is fast. This is different than warfarin that takes several days to provide adequate anticoagulation once restarted.

See [LEADER NOTES](#) for answers to discussion questions.

## REFERENCES

Doherty JU, Gluckman TJ, Hucker WJ, et al. 2017 ACC expert consensus decision pathway for periprocedural management of anticoagulation in patients with nonvalvular atrial fibrillation: a report of the American College of Cardiology Clinical Expert Consensus Document Task Force. *J Am Coll Cardiol* 2017;69:871-98.

Douketis JD, Spyropoulos AC, Anderson JM, et al. The Perioperative Anticoagulant Use for Surgery Evaluation (PAUSE) study for patients on a direct oral anticoagulant who need an elective surgery or procedure: design and rationale. *Thromb Haemost* 2017;117:2415-24.

Douketis JD, Spyropoulos AC, Duncan J, et al. Perioperative management of patients with atrial fibrillation receiving a direct oral anticoagulant. *JAMA Intern Med* 2019 Aug 5. doi: 10.1001/jamainternmed.2019.2431. [Epub ahead of print]

Douketis JD, Spyropoulos AC, Kaatz S, et al. Perioperative bridging anticoagulation in patients with atrial fibrillation. *N Engl J Med* 2015;373:823-33.

Horlocker TT, Vandermeulen E, Kopp SL, et al. Regional anesthesia in the patient receiving antithrombotic or thrombolytic therapy: American Society of Regional Anesthesia and Pain Medicine evidence-based guidelines (fourth edition). *Reg Anesth Pain Med* 2018;43:263-309.

Levy JH, Ageno W, Chan NC, et al. When and how to use antidotes for the reversal of direct oral anticoagulants: guidance from the SSC of the ISTH. *J Thromb Haemost* 2016;14:623-7.

Lip GY, Frison L, Halperin JL, Lane DA. Comparative validation of a novel risk score for predicting bleeding risk in anticoagulated patients with atrial fibrillation: the HAS-BLED (Hypertension, Abnormal Renal/Liver Function, Stroke, Bleeding History or Predisposition, Labile INR, Elderly, Drugs/Alcohol Concomitantly) score. *J Am Coll Cardiol* 2011;57:173-80.

Lip GY, Nieuwlaat R, Pisters R, et al. Refining clinical risk stratification for predicting stroke and thromboembolism in atrial fibrillation using a novel risk factor-based approach: the euro heart survey on atrial fibrillation. *Chest* 2010;137:263-72.

### **Additional Pharmacist's Letter Resources available at [PharmacistsLetter.com](http://PharmacistsLetter.com)**

Chart, Perioperative Management of Chronic Medications in Noncardiac Surgery. *Pharmacist's Letter/Prescriber's Letter*. September 2019.

Chart, Anticoagulant Use in Cirrhosis Patients. *Pharmacist's Letter/Prescriber's Letter*. July 2019.

Chart, Bridging Warfarin. *Pharmacist's Letter/Prescriber's Letter*. February 2019.

Chart, Comparison of Oral Anticoagulants. *Pharmacist's Letter/Prescriber's Letter*. December 2018.

Chart, Oral Anticoagulants for A Fib. *Pharmacist's Letter/Prescriber's Letter*. June 2018.

Chart, Managing Bleeding with Direct Oral Anticoagulants. *Pharmacist's Letter/Prescriber's Letter*. July 2018.

Chart, Appropriate Use of Oral Anticoagulants. *Pharmacist's Letter/Prescriber's Letter*. March 2018.

Chart, Managing Chronic Meds in Patients Undergoing Colonoscopy. *Pharmacist's Letter/Prescriber's Letter*. December 2017.

Chart, Managing Anticoagulation Patients After a Bleed. *Pharmacist's Letter/Prescriber's Letter*. May 2017.

### **Pharmacist's Letter Journal Club Editors:**

Lori Dickerson, PharmD, FCCP, Editor; Jennifer Nieman, PharmD, BCPS, Associate Editor; Alpa Desai, DO, Department of Community Health & Family Medicine, University of Florida, College of Medicine, Newbury, FL; Lisa D. Mims, MD, Department of Family Medicine, Medical University of South Carolina, Charleston, SC, Contributing Editors.

### **DISCLOSURE:**

The editors of this activity and its publisher, Therapeutic Research Center (TRC), have no relevant financial interests related to the products or services covered by this activity. TRC does not receive any commercial support and does not accept any advertising. It is completely independent and is supported entirely by subscriptions. TRC focuses on delivering completely objective, unbiased drug information and advice for the benefit of subscribers.

See LEADER NOTES for answers to discussion questions.