

BRINGING CLINICIANS TOGETHER TO DISCUSS CURRENT DRUG THERAPY

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The following succinct analysis appeared in *Prescriber's Letter*. Based on vol. 25, No. 5

ANTITHROMBOTICS

New evidence will raise questions about the role of aspirin for venous thromboembolism (VTE) prophylaxis after hip or knee replacement.

We're used to preventing VTE with an anticoagulant in these patients...and saving aspirin as a potentially less effective option.

But VTE risk with these surgeries is going down...due to newer techniques and post-op protocols that get patients up and moving early.

Now evidence suggests that switching to aspirin 81 mg/day after 5 days of the direct oral anticoagulant (DOAC) *Xarelto* (rivaroxaban) seems as effective as continuing *Xarelto*...with a similar bleeding risk.

This blended approach could be a game changer.

That's because DOACs and low-molecular-weight heparins (LMWH) such as enoxaparin are pricey...and warfarin is tough to stabilize short-term.

Continue to start with a DOAC or LMWH for most patients.

Consider switching to aspirin 81 mg/day after about 5 days of anticoagulation. Higher aspirin doses don't improve efficacy...but might increase bleeding.

So far, the evidence is after switching from *Xarelto* to aspirin... but it's likely okay to use other DOACs or a LMWH before switching.

Stick with an anticoagulant for the entire course for patients at higher VTE risk...such as those with a prior VTE, CV disease, extremely limited mobility, or active cancer.

Save warfarin for prosthetic valve patients or CrCl below 30 mL/min.

Continue VTE prophylaxis for at least 10 to 14 days...and preferably up to 35 days, especially after hip replacement.

If you do switch patients to aspirin, educate them to start it when their next anticoagulant dose would be due...and emphasize adherence.

Hear our team discuss all this with a thrombosis expert on *PL Voices*. And see our chart, *VTE Prevention After Hip or Knee Replacement*, for more about how meds stack up.

(For more on this topic, see Clinical Resource #340516 at PrescribersLetter.com.)

Primary Reference –Anderson DR, Dunbar M, Murnaghan J, et al. Aspirin or rivaroxaban for VTE prophylaxis after hip or knee arthroplasty. *N Engl J Med* 2018;378:699-707.

See LEADER NOTES for answers to discussion questions.

DISCUSSION QUESTIONS

OVERVIEW OF CURRENT THERAPY

1. What is known about the risk of venous thromboembolism (VTE) and VTE prevention following hip or knee replacement?

ANALYSIS OF NEW STUDY

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?

5. What were the outcomes of this trial?

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

6. What were the strengths and weaknesses of this 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

M.A. is a 74-year-old male with a past medical history of gout, hypothyroidism, and bilateral knee osteoarthritis. He comes in today complaining of worsening knee pain that is significantly impacting his quality of life. He has been taking acetaminophen 650 mg QID for several months, but doesn't feel that it provides him much relief. He misses being able to walk the dog and work in his garden. He wants to avoid surgery if possible and would like to understand his treatment options.

9. What are conservative treatment options for M.A.'s osteoarthritis?

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

You discuss the options with M.A. He doesn't want to use a topical product because he is concerned it will be expensive and messy to use. He prefers trying an oral NSAID, but wants to know about the side effects of using an NSAID long-term.

10. What are the risks of long-term oral NSAIDs? What should you consider when choosing a chronic NSAID for M.A.?

You discuss the possible risks of long-term NSAIDs, and M.A. decides he would still like to try one. You start him on naproxen 500 mg BID since M.A. is concerned about cost. You also start M.A. on omeprazole 20 mg daily, to limit his risk of GI bleeding.

M.A. returns for follow-up six months later. He's been taking naproxen as you recommended and is tolerating it well, but is still having significant pain. He has talked with an orthopedic surgeon about knee replacement surgery, and she mentioned that M.A. would need to take a medication afterward to prevent blood clots. M.A. is skeptical of the new blood thinner medications he's seen on TV and wants to know your opinion.

11. What are M.A.'s options for post-op VTE prophylaxis? How long will M.A. likely need to continue VTE prophylaxis?

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

REFERENCES

Anderson DR, Dunbar MJ, Bohm ER, et al. Aspirin versus low-molecular-weight heparin for extended venous thromboembolism prophylaxis after total hip arthroplasty: a randomized trial. *Ann Intern Med* 2013;158:800-6.

Anderson DR, Dunbar M, Murnaghan J, et al. Aspirin or rivaroxaban for VTE prophylaxis after hip or knee arthroplasty? *N Engl J Med* 2018;378:699-707.

Bozic KJ, Vail TP, Pekow PS, et al. Does aspirin have a role in venous thromboembolism prophylaxis in total knee arthroplasty patients? *J Arthroplasty* 2010;25:1053-60.

Cusick LA, Beverland DE. The incidence of fatal pulmonary embolism after primary hip and knee replacement in a consecutive series of 4253 patients. *J Bone Joint Surg Br* 2009;91:645-8.

Falck-Ytter Y, Francis CW, Johanson NA, et al. Prevention of VTE in orthopedic surgery patients: Antithrombotic Therapy and Prevention of Thrombosis, 9th ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines. *Chest* 2012;141(Suppl):e278s-e325s.

Jacobs JJ, Mont MA, Bozic KJ, et al. American Academy of Orthopaedic Surgeons clinical practice guideline on: preventing venous thromboembolic disease in patients undergoing elective hip and knee arthroplasty. *J Bone Joint Surg AM* 2012;94:746-7.

Jameson SS, Charman SC, Gregg PJ, et al. The effect of aspirin and low-molecular-weight heparin on venous thromboembolism after hip replacement: a non-randomised comparison from information in the National Joint Registry. *J Bone Joint Surg Br*. 2011;93:1465-70.

Lieberman JR, Heckmann N. Venous thromboembolism prophylaxis in total hip arthroplasty and total knee arthroplasty patients: from guidelines to practice. *J Am Acad Orthop Surg* 2017;25:789-98.

Stewart DW, Freshour JE. Aspirin for the prophylaxis of venous thromboembolic events in orthopedic surgery patients: a comparison of the AAOS and ACCP guidelines with review of the evidence. *Ann Pharmacother* 2013;47:63-74.

Additional Prescriber's Letter Resources available at PrescribersLetter.com

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

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

Chart, Antithrombotics and Valvular Heart Disease: FAQs. *Pharmacist's Letter/Prescriber's Letter*. August 2017.

Chart, LMWH Dosing in Special Populations. *Pharmacist's Letter/Prescriber's Letter*. August 2017.

PL Voices, Anticoagulation for Venous Thromboembolism. *Pharmacist's Letter/Prescriber's Letter*. June 2017.

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

Chart, Managing NSAID Risks. *Pharmacist's Letter/Prescriber's Letter*. December 2016.

Chart, Safety Comparison of NSAIDs. *Pharmacist's Letter/Prescriber's Letter*. December 2016.

Chart, Anticoagulants in Pregnancy. *Pharmacist's Letter/Prescriber's Letter*. November 2016.

PL Voices, Managing Interactions With Direct Oral Anticoagulants (DOACs). *Pharmacist's Letter/Prescriber's Letter*. May 2016.

Chart, Managing Bleeding with the New Oral Anticoagulants. *Pharmacist's Letter/Prescriber's Letter*. November 2015.

Checklist, Monitoring Checklist for the New Oral Anticoagulants. *Pharmacist's Letter/Prescriber's Letter*. October 2015.

Chart, Analgesics for Osteoarthritis. *Pharmacist's Letter/Prescriber's Letter*. July 2015.

See LEADER NOTES for answers to discussion questions.

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