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Clinical Resource #330275

pharmacist's letter journal club™

BRINGING CLINICIANS TOGETHER TO DISCUSS CURRENT DRUG THERAPY

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The following succinct analysis appeared in *Pharmacist's Letter*.

Based on trc pharmacist's letter™ Vol. 33, No. 2

INTERACTIONS

New concerns will crop up about an interaction with simvastatin or lovastatin and the direct oral anticoagulant (DOAC), *Pradaxa* (dabigatran).

These combos seem to increase bleeding risk.

Simvastatin or lovastatin might increase *Pradaxa* absorption and drug levels by inhibiting P-glycoprotein...a transporter protein that pumps drugs out of cells and into the gut, urine, or bile for excretion.

Atorvastatin also seems to inhibit P-glycoprotein...but evidence suggests it doesn't increase *Pradaxa* absorption. And other statins (rosuvastatin, etc) don't seem to inhibit P-glycoprotein.

If you get a simvastatin or lovastatin Rx for a *Pradaxa* patient, lean toward a different statin or DOAC...especially in renal impairment.

If a patient on warfarin starts an interacting statin...such as simvastatin, lovastatin, or rosuvastatin...advise closer INR monitoring.

Go to our toolbox, *Drug Interactions: A Practical Approach*, for resources to help with anticoagulant and statin interactions and more.

(For more on this topic, see Clinical Resource #330208 at PharmacistsLetter.com.)

Primary Reference – Antoniou T, Macdonald EM, Yao Z, et al. Association between statin use and ischemic stroke or major hemorrhage in patients taking dabigatran for atrial fibrillation. *CMAJ* Published online Nov 21, 2016; doi:10.1503/cmaj.160303.

Discussion Questions

Overview of current therapy

1. **What is known about statin and direct oral anticoagulant (DOAC) and metabolism and interactions?**

See LEADER NOTES for answers to discussion questions

Analysis of new study

2. What type of study was this? How were the patients identified and data obtained?

3. How were the case and control patients identified?

4. What were the case-control analysis methods?

5. What were the study results?

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

J.B. is a 75-year-old white female who presents to your office with her daughter to establish care. Her husband recently passed away, and she has recently moved to the area to be closer to her children. She currently has no complaints and just needs refills of her medications. She has a history of atrial fibrillation, and is taking carvedilol 6.25 mg twice daily for heart rate control and dabigatran 150 mg twice daily for prevention of ischemic stroke. She is taking no other medications chronically, and her past medical history is otherwise unremarkable. She brought a recent copy of her labs with her, and you note a total cholesterol of 230 mg/dL, LDL 147 mg/dL, HDL 45 mg/dL, and triglycerides 190 mg/dL.

Vitals: blood pressure 126/88 mmHg, pulse 62, oxygen saturation 97%, temp 98.2 degrees, BMI 27.

On further discussion, J.B. asks why she needs to continue dabigatran.

9. How do you counsel J.B. regarding her need for anticoagulation?

You discuss that J.B. is taking dabigatran to lower her annual risk of stroke. She agrees that the annual estimated stroke risk of almost 3% is high enough for her to desire continuing dabigatran.

J.B. brings up that her husband passed away after a myocardial infarction and she and her daughter are particularly concerned about lowering her cardiovascular risk. J.B. says that she has been trying to eat a low-cholesterol diet, is walking for 30 minutes three times a week, and has never smoked. But she wonders if she should be taking aspirin or other medications to lower her cardiovascular risk.

You calculate her 10-year risk of atherosclerotic cardiovascular disease (ASCVD) and find it to be 16%.

10. What should you consider based on J.B.'s elevated ASCVD risk?

You discuss that the risks of aspirin likely outweigh its benefits for J.B., but advise starting a statin. J.B. agrees, and you prescribe atorvastatin 40 mg daily.

J.B. returns for a one-month follow-up and is unhappy because the atorvastatin was expensive. The pharmacy recommended lovastatin as a lower cost option. J.B. asks if you will prescribe lovastatin instead of the atorvastatin.

11. What options do you discuss with J.B.?

You discuss these options and J.B. decides to remain on dabigatran and switch to pravastatin.

See LEADER NOTES for answers to discussion questions

References

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Wiggins BS, Saseen JJ, Page RL, et al. Recommendations for management of clinically significant drug-drug interactions with statins and select agents used in patients with cardiovascular disease: a scientific statement from the American Heart Association. *Circulation* 2016;134:e468-95.

Additional *Pharmacist's Letter* Resources available at PharmacistsLetter.com
Toolbox, Drug Interactions: A Practical Approach. *Pharmacist's Letter/Prescriber's Letter.* February 2017.
PL VOICES, Anticoagulation in Atrial Fibrillation. *Pharmacist's Letter/Prescriber's Letter*. October 2016.
PL VOICES, Managing Interactions With Direct Oral Anticoagulants (DOACs). *Pharmacist's Letter/Prescriber's Letter*. May 2016.
Chart, Cytochrome P450 Drug Interactions. *Pharmacist's Letter/Prescriber's Letter.* April 2016.
Chart, P-glycoprotein Drug Interactions. *Pharmacist's Letter/Prescriber's Letter.* April 2016.
Chart, Comparison of Oral Anticoagulants. *Pharmacist's Letter/Prescriber's Letter*. April 2016.
Chart, Clinically Significant Statin Drug Interactions. *Pharmacist's Letter/Prescriber's Letter.* March 2016.
Toolbox, Appropriate Use of Oral Anticoagulants. *Pharmacist's Letter/Prescriber's Letter*. March 2016.
PL VOICES, Restarting Anticoagulation in Atrial Fibrillation After a GI Bleed. *Pharmacist's Letter/Prescriber's Letter*. February 2016.
Chart, Managing Anticoagulation Patients After a Bleed. *Pharmacist's Letter/Prescriber's Letter*. February 2016.
PL VOICES, Monitoring Direct Oral Anticoagulants. *Pharmacist's Letter/Prescriber's Letter*. October 2015.
Commentary, Oral Anticoagulants: Maximizing Safety. *Pharmacist's Letter/Prescriber's Letter.* October 2015.
Checklist, Monitoring Checklist for the New Oral Anticoagulants. *Pharmacist's Letter/Prescriber's Letter*. October 2015.
Chart, Lipid Treatment FAQs. *Pharmacist's Letter/Prescriber's Letter.* April 2015.
PL VOICES, GI Bleeding Concerns With Dabigatran (*Pradaxa*). *Pharmacist's Letter/Prescriber's Letter*. July 2014.
Chart, 2013 ACC/AHA Cholesterol Guidelines. *Pharmacist's Letter/Prescriber's Letter*. January 2014.

Welcome to *PL Journal Club*

PL Journal Club gives you insights and guides you to the discoveries that *Pharmacist's Letter* researchers and editors uncover. Each month we analyze many new studies and help you discover the answers to the hard questions. "What are the real advantages and disadvantages of new therapies?" "How do they compare with other options?" "What do pharmacists and prescribers need to know?" We look beyond the headlines and promotional materials to interpret the clinical studies and data. Sometimes the marketing spin doesn't stand up to scrutiny. Sometimes studies do not really prove what they are reported to prove. *PL Journal Club* helps guide you to the truth and how to apply new findings to patient care.

PL Journal Club builds on *Pharmacist's Letter* to provide you with background for your own journal club discussions. We won't bring up every possible question, but you can…in your own group meetings. If a question comes up, go to PharmacistsLetter.com to find more background. As a *PL Journal Club* participant, you get access to all of *Pharmacist's Letter*. Feel free to call or email us with suggestions or if we can be of assistance... 209-472-2240 or PLJournalClub@pletter.com.

Instructions

Go to PharmacistsLetter.com to get the *PL Journal Club* PARTICIPANT NOTES. Use the search function to look for "*Journal Club*." You'll also get great background materials, including *Pharmacist's Letter* and clinical resources. *PL Journal Club* functions like a typical group meeting, except that it is organized for you with the expert analysis of important new studies done by the large *Pharmacist's Letter* research and editorial staff. Let the questions serve as a springboard for your discussions. Use our patient cases or your own cases to shape the discussion. Each month, *PL Journal Club* reviews a topic that is also covered in *Pharmacist's Letter*. You'll also find a library of previous *PL Journal Clubs* online for your use.

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