Quiz: A Case of Dabigatran-associated Acute Renal Failure

EDUCATIONAL OBJECTIVES
Upon completion of this activity, participants will be able to:

1. Understand some of the pharmacology of dabigatran and how its activity can be monitored.

2. Understand the etiology and pathophysiology of renal atheroembolic disease.

PUBLICATION DATE: August 15, 2013
EXPIRATION DATE: August 15, 2014

QUESTIONS

1. Dabigatran is a direct thrombin inhibitor.
   □ True □ False

2. Dabigatran is indicated to reduce the risk of systemic embolism in patients with atrial fibrillation due to valvular heart disease.
   □ True □ False

3. Renal atheroembolic disease, also known as cholesterol embolization, causes a decline in renal function due to occlusion of renal arteries, arterioles, and glomerular capillaries by cholesterol crystals, which dislodge from atherosclerotic plaques.
   □ True □ False

4. In clinical practice, almost half of all cases of acute renal failure may be attributed to renal atheroembolic disease.
   □ True □ False

5. The most common extra-renal manifestation of atheroembolic renal disease is skin involvement in the form of livedo reticularis, blue toe syndrome, ulceration, gangrene, and purpura.
   □ True □ False

6. The most common cause of renal atheroembolic disease is a result of an interventional or surgical procedure involving manipulation of the aorta or other major blood vessels.
   □ True □ False

7. Renal atheroembolic disease is a not uncommon complication following treatment with warfarin, heparin and thrombolytic agents and can be implicated in more than 20% of cases without preceding vascular interventional procedures.
   □ True □ False

8. Spontaneous atheroembolic disease is rare with reported incidence of 1.9% to 13%.
   □ True □ False

9. The exact mechanism underlying anticoagulant- or thrombolytic-induced atheroembolic renal disease is not clear; however, one proposed explanation is that anticoagulants and thrombolytics may disrupt or dissolve protective thrombi that cover ulcerated atherosclerotic plaques, exposing the lipid core to the systemic circulation.
   □ True □ False

10. Renal atheroembolic disease is usually found in adults older than 60 years with diffuse atherosclerosis.
    □ True □ False

11. Dabigatran is primarily cleared by the liver.
    □ True □ False

12. The prothrombin time/international normalised ratio (PT/INR) is recommended for use in monitoring dabigatran activity in clinical practice.
    □ True □ False

13. The thrombin time (TT) is considered too sensitive to monitor dabigatran activity; however, a normal TT rules out any dabigatran effect.
    □ True □ False

14. Hemodialysis is not effective in removing dabigatran.
    □ True □ False

15. The authors of this case report suggest that dabigatran may induce renal atheroembolic disease in elderly patients with appropriate risk factors for atherosclerosis.
    □ True □ False

You may earn CME credit by reading the designated article in this issue and successfully completing the quiz (75% correct). Return completed quiz to WMJ CME, 330 E Lakeside St, Madison, WI 53715 or fax to 608.442.3802. You must include your name, address, telephone number, and e-mail address.

The Wisconsin Medical Society (Society) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians. The Wisconsin Medical Society designates this journal-based CME activity for a maximum of 1.0 AMA PRA Category 1 Credit™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.
advancing the art & science of medicine in the midwest

The mission of *WMJ* is to provide a vehicle for professional communication and continuing education for Midwest physicians and other health professionals.

*WMJ* (ISSN 1098-1861) is published by the Wisconsin Medical Society and is devoted to the interests of the medical profession and health care in the Midwest. The managing editor is responsible for overseeing the production, business operation and contents of the *WMJ*. The editorial board, chaired by the medical editor, solicits and peer reviews all scientific articles; it does not screen public health, socioeconomically, or organizational articles. Although letters to the editor are reviewed by the medical editor, all signed expressions of opinion belong to the author(s) for which neither *WMJ* nor the Wisconsin Medical Society take responsibility. *WMJ* is indexed in Index Medicus, Hospital Literature Index, and Cambridge Scientific Abstracts.

For reprints of this article, contact the *WMJ* at 866.442.3800 or e-mail wmj@wismed.org.

© 2013 Wisconsin Medical Society