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DABIGATRAN AFTER CARDIAC SURGERY: CAUTION ADVISED To the Editor:

We recently read the interesting study by McKellar and associates¹ evaluating the effectiveness of dabigatran for thromboprophylaxis after implantation of mechanical heart valves. Using a heterotopic aortic valve model, the authors randomized 30 swine to receive dabigatran, enoxaparin, or no anticoagulation after implantation of a mechanical valve conduit. At 30 days, McKellar and associates¹ reported that dabigatran reduced thrombus and platelet deposition on the mechanical valve leaflets without an increase in adverse events.

Several new oral direct thrombin inhibitors are being evaluated as alternatives for long-term anticoagulation because of the widely known difficulties associated with warfarin, including its long half-life and unpredictable dose response. Compared with warfarin, dabigatran has no food or drug interactions, has a rapid onset of action, and does not require blood monitoring.^{2,3} Paradoxically, while lauded for its ease of use, the management of patients receiving dabigatran may be extremely challenging in the setting of active bleeding and coagulopathy. McKellar and colleagues¹ claim that, in contrast to warfarin, dabigatran “could prove safer should emergency surgery be needed.” We respectfully disagree with this statement. There is no known antidote available for dabigatran. Vitamin K and fresh frozen plasma are ineffective, and dialysis may be the only means available to rapidly reverse the anticoagulant effects of dabigatran.^{4,5}

We recently prescribed dabigatran to a 74-year-old woman after coronary

artery bypass graft surgery. The patient had a history of atrial fibrillation and had previously refused warfarin therapy. After surgery, she continued to refuse warfarin, but she agreed to take dabigatran to reduce the risk of stroke and systemic embolism.⁶ Dabigatran was initiated on postoperative day 3 using the lowest possible dose (75 mg twice daily), given the patient’s frailty and mild renal insufficiency. She was monitored in the hospital for 6 additional days before transfer to a rehabilitation facility. A chest x-ray film before discharge noted a very small left pleural effusion. Two days after transfer, the patient returned to hospital with a massive left hemothorax and gastrointestinal bleeding. She was treated with intubation for respiratory distress and placement of a left thoracostomy tube, draining more than 2 L of blood. The patient had evidence of a severe coagulopathy, with an international normalized ratio of 21.5 and a partial thromboplastin time of 161.2. To manage the bleeding, we instituted emergency dialysis, successfully correcting the coagulopathy. After 2 dialysis treatments, the international normalized ratio and partial thromboplastin time were reduced to 1.9 and 47.4, respectively, and the chest and gastrointestinal bleeding had subsided. The patient made a miraculous recovery and was discharged back to rehabilitation 2 weeks later without anticoagulation therapy.

McKellar and associates¹ are to be congratulated for their novel study. Their animal model data suggest that dabigatran may have a role in the thromboprophylaxis of mechanical valves. We would be intrigued to learn whether they have had any clinical experience using dabigatran in patients undergoing cardiac surgery, either for the thromboprophylaxis of mechanical valves or for the anticoagulation of atrial fibrillation. Although our experience is limited to a single case, the outcome was nearly fatal. We would therefore strongly advise caution when prescribing dabigatran

early after cardiac surgery, at least until additional clinical experience accrues.

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DOUBLE RIGHT CORONARY ARTERY OR CONUS ARTERY WITH SEPARATE ORIFICE?

To the Editor:

In their recent Cardiothoracic Imaging article, Chen, Chien, and Lee¹ have applied the term “double right coronary artery”¹ (RCA) in a debatable way.

The anatomic nomenclature for the situation they have described has been better termed “the conus artery: a third coronary artery”²; “conus coronary artery with aortic origin”³; or, more appropriately, “conus artery with separate orifice,” coded as