Interrupting DOACs for surgery associated with low rates of major bleeding, clots in afib patients

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A perioperative strategy of direct oral anticoagulant (DOAC) interruption that did not require the use of heparin bridging or coagulation function testing was associated with low rates of major bleeding and arterial thromboembolism in patients with atrial fibrillation, a study found.

Researchers assessed the safety of a standardized perioperative DOAC management strategy in 3,007 adults (mean age, 72.5 years; 66.1% men) with atrial fibrillation in the Perioperative Anticoagulation Use for Surgery Evaluation (PAUSE) cohort study. Participants were long-term users of apixaban (*n*=1,257 [41.8%]), dabigatran (*n*=668 [22.2%]), or rivaroxaban (*n*=1,082 [36.0%]) and were

enrolled from Aug. 1, 2014, through July 31, 2018, at 23 centers in the U.S., Canada, and Europe.

The DOAC interruption and resumption strategy was based on pharmacokinetic properties, procedure-associated bleeding risk, and creatinine clearance levels. DOAC regimens were omitted for one day before procedures with low bleeding risk and for two days before procedures with high bleeding risk. Regimens were resumed one day after low-bleeding-risk procedures and two to three days after high-bleeding-risk procedures. Patients were followed for 30 days after surgery. The main outcomes were major bleeding and arterial thromboembolism (ischemic stroke, systemic embolism, and transient ischemic attack). Results were published online on Aug. 5 by *JAMA Internal Medicine*.

The researchers' hypothesis that the PAUSE management strategy would exclude a 2% rate of major bleeding was supported in the dabigatran group, but not in the apixaban or rivaroxaban groups, while their hypothesis that the strategy would exclude a 1.5% rate of arterial thromboembolism was supported in all three cohorts. At 30 days, the postoperative rate of major bleeding was 1.35% (95% CI, 0% to 2.00%) in the apixaban group, 0.90% (95% CI,

to 2.03%) in the rivaroxaban group. The rate of arterial thromboembolism was 0.16% (95% CI, 0% to 0.48%) in the apixaban group, 0.60% (95% CI, 0% to 1.33%) in the dabigatran group, and 0.37% (95% CI, 0% to 0.82%) in the rivaroxaban group. A per protocol analysis found that a 2% rate of major bleeding was excluded in the dabigatran and apixaban groups, but not in the rivaroxaban group, and a 1.5% rate of arterial thromboembolism was excluded in all three cohorts.

Limitations of the study include its cohort study design and the fact that the dabigatran group did not reach the expected sample size, the authors noted. They added that most participants were white and that the results are not generalizable to edoxaban, which was not available when the study began. They concluded that the strategy is “likely to be easily adoptable in clinical practice.”