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Commentary: NOAC? No problem

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CENTRAL MESSAGE

The use of NOACs as the preferred method of anticoagulation is increasing in part due to their relative ease of use. This should not preclude the requisite studies of efficacy and safety.

Since approval by the Food and Drug Administration in 2010, the use of non-vitamin K oral anticoagulants (NOACs) as an alternative to vitamin K antagonists (VKAs) is increasing. In the accompanying article, Beller and colleagues[1] point out in their introduction that fixed dosing, lack of food–drug interactions, and absence of frequent laboratory monitoring are all factors behind this increased use. Because of this trend, they sought to examine the use of NOACs following cardiac surgery.[1] They compared 2 cohorts of patients spanning the time from the initial Food and Drug Administration approval of these agents with the 2 groups divided to give roughly equal numbers. They found, not surprisingly, that NOAC use has increased significantly over this time frame.

It is of interest that this increase is only relative to the use of VKAs. The overall percentage of anticoagulation with either a VKA or NOAC following bioprosthetic valve implantation was essentially unchanged over this time period. In other words, the availability of NOACs did not appear to influence the decision whether to prescribe an anticoagulant postoperatively, only which agent to use.

Efficacy has now been shown to the extent that updated guidelines for the management of atrial fibrillation allow for NOACs as first-line therapy in appropriate patients.[2] Therefore, the increase seen in the coronary artery bypass group, mostly for the treatment of atrial fibrillation, now at least has some support. One limitation of the study was that it was not possible to correlate preoperative use of anticoagulation with postoperative use. Therefore, it is not known in those patients who were on anticoagulation preoperatively whether the choice of preoperative agents was related to the choice postoperatively.

Perhaps a larger issue concerns patients receiving bioprosthetic valve replacements. Current guidelines provide for reasonable anticoagulation with a VKA in the first 3 to 6 months after bioprosthetic mitral valve replacement or bioprosthetic aortic valve replacement.[3] This is primarily to decrease the risk of thromboembolism during this period. The role of NOACs in these situations has yet to be determined.

As summarized by the authors, this study demonstrates that trends in the increased substitution of NOACs as the anticoagulant of choice are also seen in the post-cardiac surgical population. As the drivers may include increased ease of use, they are right to call for prospective clinical trials to assess efficacy. Furthermore, these trials should also examine relative effectiveness of the individual NOACs as well as variabilities in dosing.[4]

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References

1. Beller JP, Krebs ED, Hawkins RB, Mehaffey JH, Quader MA, Speir AM, et al. Non–vitamin K oral anticoagulant use after cardiac surgery is rapidly increasing. *J Thorac Cardiovasc Surg*. 2020;160:1222-31.
2. January CT, Wann LS, Calkins H, Chen LY, Cigarroa JE, Cleveland JC Jr, et al. 2019 AHA/ACC/HRS focused update of the 2014 AHA/ACC/HRS guideline for the management of patients with atrial fibrillation: a report of the American College of Cardiology/American Heart Association task force on clinical practice guidelines and the heart rhythm society. *Circulation*. 2019;140:e125-51.
3. Nishimura RA, Otto CM, Bonow RO, Carabello BA, Erwin JP III, Fleisher LA, et al. 2017 AHA/ACC focused update of the 2014 AHA/ACC guideline for the management of patients with valvular heart disease: a report of the American College of Cardiology/American Heart Association task force on clinical practice guidelines. *Circulation*. 2017;135:e1159-95.
4. Zhan Y, Joza J, Al Rawahi M, Barbosa RS, Samuel M, Bernier M, et al. Assessment and management of the left atrial appendage thrombus in patients with non-valvular atrial fibrillation. *Can J Cardiol*. 2018;34:252-61.