



LETTER TO THE EDITOR**A word of caution**

To the Editor

We read with interest the review “Real-world use of nonvitamin K antagonist oral anticoagulant (NOAC) in atrial fibrillation (AF) patients with liver disease: A meta-analysis” by Qixin Dai et al.¹ The meta-analysis is informative as unlike clear-cut guidelines for the use of anticoagulant drugs in patients with renal impairment the guidelines for patients with preexisting liver diseases are conspicuously missing. The study shows NOACs are not only safer but more efficacious than warfarin in patients with liver disorders with nonvalvular AF. A clinically important message as use of warfarin despite carrying more bleeding liabilities is not efficacious in patients with end-stage renal impairment.²

The authors must cogently emphasize that bias is inevitable despite careful selection of the included studies; as they are retrospective, therefore despite adjusted analysis many unmeasured and residual variables remain unaccounted. The current regulatory recommendations are rather clear for patients with liver disease with Child-Pugh A (warfarin or NOACs are equally safe and effective) and with score Child-Pugh C (only warfarin is indicated); however, for patients with liver disease with Child-Pugh B score, a sufficiently powered randomized control trial is the need-of-the-hour to answer what is the best alternative warfarin or one of the NOACs (preferably either dabigatran or apixaban, largely because of more favorable pharmacodynamics and pharmacokinetics in patients with liver diseases).³

Neelesh Gupta¹
Krunalkumar Patel² 
Rajeev Gupta³ 

¹Department of Internal Medicine, Nazareth Hospital, Philadelphia, Pennsylvania

²Department of Internal Medicine, St Mary Medical Center, Langhorne, Pennsylvania

³Department of Cardiology, Mediclinic Al Jowhara Hospital, Al Ain, United Arab Emirates

Correspondence

Rajeev Gupta, MD, DM, FICC, Mediclinic Al Jowhara Hospital, Chairman, CME Committee, Mediclinic Al Ain Region, P.O. Box 222766, Al Ain, United Arab Emirates.
Email: rajeevsavita.gupta@gmail.com

ORCID

Krunalkumar Patel  <https://orcid.org/0000-0002-0636-6498>

Rajeev Gupta  <https://orcid.org/0000-0002-0327-2795>

REFERENCES

1. Dai Q, Deng X, Zhou L, Zhang L, Xiao X, Liao Y. Real-world use of non-vitamin K antagonist oral anticoagulant in atrial fibrillation patients with liver disease: a meta-analysis. *Clin Cardiol.* 2020;43:1–8. <https://doi.org/10.1002/clc.23408>.
2. Randhawa MS, Vishwanath R, Rai MP, et al. Association between use of warfarin for atrial fibrillation and outcomes among patients with end-stage renal disease: a systematic review and meta-analysis. *JAMA Netw Open.* 2020;3(4):e202175.
3. Qamar A, Vaduganathan M, Greenberger NJ, Giugliano RP. Oral anti-coagulation in patients with liver disease. *J Am Coll Cardiol.* 2018;71(19):2162–2175.