

Capsule Commentary on Efirid et al., Identifying the Risks of Anticoagulation in Patients with Substance Abuse

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To anticoagulate or not to anticoagulate? That is the question...that is regularly encountered by physicians and their patients, and the consequences of making the wrong decision may include devastating outcomes such as stroke, pulmonary embolism, and life-threatening hemorrhage. Physicians help guide patient decision-making by assessing individualized risks and benefits. While there is substantial evidence available regarding benefits, physicians have inadequate tools to predict risk for major hemorrhage. While bleeding risk scores are available, such as HAS-BLED and HEMORR₂HAGES, they are only slightly better than chance at identifying patients who will bleed.¹ Most physicians tend to overestimate a patient's risk for bleeding,² and this is a key reason why anticoagulants are underused in key populations, such as patients with atrial fibrillation.³

One potential risk factor for bleeding during anticoagulant use is substance abuse, but it is unclear whether anticoagulants should be avoided among substance abusers. Efirid et al. analyzed the US Department of Veterans Affairs (VA) database to retrospectively assess the risk of anticoagulation among substance abusers.⁴ They determined that both alcohol and drug abusers had significantly worse anticoagulation control, and higher rates of bleeding independent of anticoagulation control. Poor outcomes were substantially higher for drug abusers than alcohol abusers.

The most interesting and novel finding in this study was the association between AST:ALT ratio and poor outcomes. Among alcohol abusers, an AST:ALT ratio > 2.0 was

associated with both poor anticoagulation control and a three-times increased rate of bleeding. Meanwhile, an AST:ALT ratio of < 1.5 among alcohol abusers was not associated with an increased rate of major hemorrhage. This simple clinical measure may be a means to risk-stratify alcohol abusers into two groups: those with substantial increased risk for bleeding on anticoagulation versus those with no increased risk compared to non-abusers. Future work should involve the incorporation of the AST:ALT ratio into risk prediction schemes, and its utility for prospectively predicting bleeding events should be tested. At present, this study should give providers pause in providing anti-coagulation to their patients who also suffer from substance abuse.

Conflict of Interest: The author declares no conflicts of interest.

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