Letter to the Editor

Regarding Epistaxis in the Setting of Antithrombotic Therapy: A Comparison Between Factor Xa Inhibitors, Warfarin, and Antiplatelet Agents

Dear Editor:

We read Glikson et al.'s report with interest and would like to underscore some key points regarding the role of anticoagulation reversal in the management of patients hospitalized with epistaxis. Most notably, the study does not systematically report its use. Although it is stated in the Discussion that six of the patients with supratherapeutic international normalized ratio (INR) in the warfarin group received vitamin K1, it is unclear whether additional treatments were given or which agents, if any, were used to reverse apixaban- or rivaroxaban-induced coagulopathy. Did these patients taking factor Xa antagonists receive andexanet alfa on an investigational basis? If not, did they receive prothrombin complex concentrate, fresh frozen plasma, or other hemostatic factors? It is also unclear whether patients being prescribed anti-factor Xa medications were coagulopathic because anti-factor Xa levels, INR, prothrombin time, or partial thromboplastin time were not reported in the patient demographics. In the absence of these data, one cannot determine the cause for similar outcomes and treatments observed between the study groups.

We also wonder what proportion of patients in the warfarin, rivaroxaban, and apixaban groups was receiving concurrent antiplatelet therapy. In a trial of rivaroxaban for nonvalvular atrial fibrillation, 35% of patients in the rivaroxaban arm were taking aspirin.2 A large proportion of patients taking combination therapy may explain the lack of observed difference between groups. Alternatively, if the proportion of patients taking antiplatelet–anticoagulant combination therapy was low, the increased rate of endoscopic intervention in patients taking antiplatelet therapy may be partially explained by the lack of effective therapies for reversing platelet dysfunction. Both aspirin and clopidogrel irreversibly impair platelet function and poison newly transfused platelets in patients who recently took the medication.

Lastly, the authors state that “[rivaroxaban and apixaban] have a short half-life time (7–14 hours) compared to warfarin, and withholding them can be very effective.”1 The elimination half-lives of apixaban and rivaroxaban in elderly patients are 15 hours and 12 hours, respectively.3,4 As such, it would take at least 60 hours (approximately 5 half-lives) to eliminate 96% of the drug—unacceptably long in the setting of critical bleeding. The time to effective hemostasis is likely even longer in the setting of overdose or impaired renal function,5 data that are missing from this report. We believe that rapid administration of specific reversal agents may improve outcomes in carefully chosen patients with severe anticoagulant-related bleeding.

KHAM ALI
St. John’s Riverside Hospital, Department of Emergency Medicine, Yonkers, New York, U.S.A.

JOSH J. WANG
New York University School of Medicine, Ronald O. Perelman Department of Emergency Medicine, Division of Medical Toxicology, New York, New York, U.S.A.

BIBLIOGRAPHY