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Dabigatran and Acute Stroke Thrombolysis

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We recently treated a 75-year-old woman who presented 33 min into a left middle cerebral artery territory ischemic stroke with a National Institute of Health Stroke Scale (NIHSS) score of 8. She was a recent participant in the RE-LY study comparing warfarin to dabigatran for stroke prevention in atrial fibrillation [1] and was normally now on dabigatran. Three days prior to her event, she had discontinued dabigatran in preparation for excision of a nasal basal cell carcinoma. She had resumed the drug 2.5 h prior to the event. Because of the pharmacokinetic properties of dabigatran, we elected not to thrombolysed the patient. Twenty-four hours after the event, her NIHSS score was 2.

Dabigatran is a direct thrombin inhibitor with a reported half-life of 11 h in healthy volunteers and reaches peak plasma concentration in 30 min to 2 h [2]. At a dose of 150 mg twice daily, it has similar rates of major hemorrhage as warfarin targeted to an international normalized ratio (INR) of 2.0–3.0 [1, 3]. Current use of an oral anticoagulant or having an INR of >1.7 are considered contraindications to thrombolytic therapy in acute stroke [4].

Dabigatran prescription is likely to become much more ubiquitous in patients with atrial fibrillation and venous thromboembolism [1, 3]. Furthermore, many other oral direct thrombin and factor Xa inhibitors are being actively studied [5]. Unlike warfarin, there is no rapidly available laboratory test to assess how an-

ticoagulated a patient may be while on these agents. Thus, we believe this case illustrates the important need for acute stroke physicians to become aware of the pharmacokinetics of newer anticoagulants and for the stroke community to reach a formal consensus on using thrombolytics in patients on such drugs.

References

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