Why it is important to use the correct dose of the non-vitamin K oral anticoagulants

B. Jacobs, R. Willems, and C. Garweg*

Department of Cardiology, University Hospitals Leuven, Herestraat 49, Leuven 3000, Belgium

* Corresponding author. Tel: +32 16344235, E-mail: christophe.garweg@uzleuven.be

A 75-year-old woman with a history of persistent non-valvular atrial fibrillation (AF) was readmitted to our institution due to recurrence of AF with dyspnoea (NYHA class III). Her CHA2DS2-VASC score was 5/9, and she weighed 68 kg and had a normal renal function (GFR: 78 mL/min). Three months earlier, she had transoesophageal echocardiography (TEE)-guided electrical cardioversion (Panels A and B) while anticoagulated with apixaban 5 mg BID. Meanwhile, her general practitioner reduced apixaban dosage to 2.5 mg BID because of recurrent ecchymosis. Compliance of anticoagulation therapy was confirmed with her outpatient pharmacy refill records. In view of the inappropriate dose reduction of apixaban, TEE was repeated and demonstrated the presence of a new left atrial appendage thrombus (red arrow on Panels C and D). Cardioversion was postponed and apixaban was increased to the recommended dose (5 mg BID). Six weeks later, a new TEE confirmed the disappearance of the intra-atrial thrombus (Panels E and F) and the patient was electrically cardioverted.

This case report suggests that TEE remains mandatory prior to converting a patient treated with an inappropriate dose of new oral anticoagulant. Recently, Flaker et al. showed in a post hoc analysis from the ARISTOTLE trial that apixaban is as safe and effective as vitamin K antagonist treatment in the setting of cardioversion.

In our patient, off-label use of apixaban 2.5 mg BID resulted in the formation of an intra-atrial thrombus. It emphasizes that respecting the accurate dose for each patient according to the international recommendations is essential.