Atrial fibrillation (AF) is responsible for about 25% of all ischemic strokes [1], and the risk of stroke attributed to AF increases with age [2]. AF was associated with increased stroke severity, high frequency of complications and poor outcome [3–5]. Thrombolytic therapy with intravenous tissue plasminogen activator (tPA) is of net benefit in patients with acute ischemic stroke [6].

Approximately 50–60% of ischemic strokes in patients with AF are definitely or probably cardioembolic in origin [7, 8]. In patients with cardioembolic stroke, cerebral arteries are mostly occluded by red thrombi [9]. Red thrombi, which contain erythrocytes and some fibrin, were found to be more vulnerable to tPA with a resultant higher chance of recanalization in an animal study [10]. This finding is reflected in clinical observations that successful tPA-induced recanalization often occurred in cardioembolic strokes [11, 12]. Because ischemic stroke in patients with AF mostly depends on embolism, a primary preventive approach treatment with oral anticoagulants is mandatory [13–16]. What if a patient with AF and anticoagulant treatment is suffering from acute ischemia stroke?

Marrone and Marrone [17] reported a case of a 73-year-old man with a history of AF who was submitted to intravenous thrombolysis while under treatment with new classes of anticoagulants. In the guidelines of almost all countries, AF in isolation is not regarded as a contraindication for thrombolytic therapy. However, a patient who could be treated with tPA must, according to the guideline, not take an oral anticoagulant or if an anticoagulant has been taken, the INR must be ≤1.7 or if the patient has received heparin in the previous 48 h, the APTT must be in the normal range. This patient’s INR and APTT did not meet this criterion. I believe that the neurologist was unaware of the patient’s use of dabigatran. Fortunately, the patient did not develop cerebral hemorrhage. In my opinion, we should prefer intravascular thrombolysis to lessen the effect on the coagulation time. C.Z. and L.Z. contributed equally to this work.

Disclosure Statement

There is no conflict of interest.

References


