Anticoagulation after stroke: how soon is too late?

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Abstract

Anticoagulation is the mainstay of long term therapy for the primary and secondary prevention of cardio-embolic ischaemic stroke. However, when the patient presents with an ischaemic or haemorrhagic stroke, and is a candidate for long-term anticoagulation, the issue of when to start anticoagulation arises. The delicate balance between the risk of a new embolic event and the risk of haemorrhage of an ischaemic lesion/new haemorrhage shifts as time from the index event passes. Therefore, there should be an optimal cut-off point, where the risk of a new event clearly offsets the risk of bleeding and where introducing anticoagulation would be clearly advantageous. Unfortunately, there is no good-quality evidence regarding the optimal timing of anticoagulation in acute stroke therapy.

Current atrial fibrillation guidelines favour decision on a case-by-case basis. Regarding ischaemic stroke, factors such as presenting National Institutes of Health Stroke Scale (NIHSS), infarct extension on computed tomography (CT) images, perceived recurrence risk, clinical stability, age, blood pressure control and need for surgery should be taken into account, together with repeat CT before starting anticoagulation, preferably with a novel oral anticoagulant. Anticoagulation can generally be introduced 1 to 12 days from stroke onset [1 day for transient ischaemic attack, and 3, 6 or 12 days for mild (NIHSS<8), moderate (NIHSS 8-15) or severe (NIHSS>15) stroke, respectively]. On the other hand, for haemorrhagic stroke, the factors leading to bleeding, such as blood pressure control, anticoagulant dosing and blood levels, embolic risk, alcohol consumption and prior bleeding history, should be carefully examined to decide whether the patient is a candidate for resuming anticoagulation. If so, anticoagulation can be started 4-8 weeks after stroke onset.

At the time of writing, there are multiple ongoing clinical trial such as RASS, DATAS II, START, ELAN, RELAXED and APACHE-AF which are trying to compare early versus late initiation of anticoagulation after stroke, and will certainly provide better quality evidence supporting or disproving current guidelines.

This lecture will cover current guidelines, observational data and ongoing clinical trials in an effort to answer the question of how soon is too late to start anticoagulation after stroke.