Intracerebral haemorrhage growth is influenced by anticoagulation intensity

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Background: Intracerebral hemorrhage (ICH) is a significant contributor to global health-related morbidity and mortality. Due to improved recognition and treatment of atrial fibrillation by antithrombotics, there is an increase in proportion of ICH caused by warfarin and novel oral anticoagulants. However, the relationship between anticoagulation intensity and hematoma expansion remains unclear. We aimed to investigate the effects of INR on hematoma expansion post ICH.

Methods: We conducted a retrospective study of all patients hospitalized for ICH at a single institution from January 1, 2008 and August 1, 2014. Hematoma volumes on initial CT scans and repeat CT scans were analyzed by the AxBxC/2 method. Univariate analysis was used to compare baseline characteristics and median regression analysis was performed to estimate the effects of INR and hematoma volume changes.

Results: We included 224 consecutive ICH patients. Median age (IQR) was 68.5 years (17.0), 60.3% were male, median presentation Glasgow Coma Scale (GCS) (IQR) was 14.0 (4.0), median volume (IQR) of the first CT was 11.7ml (25.6), median INR (IQR) was 1.1 (0.2). We showed that INR and time lapsed between first CT and second CT were independent risk factors to hematoma volume change, adjusting for baseline hematoma volume and time. For each 1.0 increase in INR was associated with hematoma volume increased by 2.4ml (p = 0.015).

Conclusions: We showed that high INR was associated with hematoma growth post ICH. However, the effects of reversal anticoagulation in the attenuation of hematoma growth remain uncertain and require confirmation in future randomized controlled studies.

Biography
Weimin Yang has completed his PhD from Sichuan University and visitor scholar studies from Melbourne University. He is the professor in Dept. of Neurology, First Affiliated Hospital of Zhengzhou University, master tutor, innovative talents of Henan Province Health Sciences and Technology. His research work mainly related to clinical features of Chinese stroke patients, stroke register, dementia, and systematic reviews of therapies from China. He has published more than 25 papers in reputed journals.
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