Risk factors for fast early infarct growth in patients with acute ischemic stroke

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Background: Fast early infarct growth (EIG) has been shown to be an important predictor of patient neurological outcomes and all-cause mortality. However, the factors related to fast EIG remain largely unknown. The present study aimed to elucidate the risk factors for fast EIG in acute ischemic stroke with a large vessel occlusion.

Materials and Methods: In this single-center prospective study, patients with acute ischemic stroke due to anterior circulation large vessel occlusion identified by CT or MRI 24-h from onset were included and analyzed. Fast EIG was defined as infarct volume on baseline imaging/onset-to-imaging time ≥ 10 mL/h..

Results: Overall, 149 patients, including 83 males and 56 females at a median age of 71 years and median NIS Stroke Scale of 15 (interquartile rage 8-22) were included. A total of 58 (38.93%) patients were determined to have fast EIG. A higher age (HR=2.42, P=0.009), advanced NIS Stroke Scale (HR=1.43, P=0.02) and poor collateral perfusion on imaging (HR=5.21, P<0.001) were noted to be independent risk factors for a fast EIG. In addition, patients with fast EIG had significantly unfavorable neurological outcomes as indicated by the 3-month modified Rankin Scale than those without fast EIG (P<0.001).

Conclusions: Advanced age, NIS Stroke scale and poor collateral perfusion were risk factors for fast EIG in acute ischemic patients with a large vessel occlusion.

Biography

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