

Cardioembolic stroke

A cardioembolic stroke occurs when the heart pumps unwanted materials into the brain circulation, resulting in the occlusion of a brain blood vessel and damage to the brain tissue.

Outcome

Cardioembolic [stroke](#) has a poor [prognosis](#).

Oki et al. evaluated the region-dependent [efficacy](#) of [endovascular therapy](#) (EVT) based on [diffusion-weighted imaging](#)-Alberta Stroke Program Early CT Score ([DWI-ASPECTS](#)).

This post-hoc analysis of the [RELAXED study](#), which investigated the optimal timing of [rivaroxaban](#) to prevent nonvalvular [atrial fibrillation](#) (NVAf) recurrence in patients with [acute ischemic stroke](#) (AIS), included NVAf patients admitted with [AIS](#) or [transient ischemic attack](#) in the [middle cerebral artery](#) (MCA), with [internal carotid artery](#) (ICA), M1, or M2-MCA occlusion. Relationships between [DWI-ASPECTS](#) region and [functional outcome](#) ([modified Rankin Scale](#) [mRS]), [mortality](#), [recurrence](#), and [hemorrhagic stroke](#) were compared between patients with and without EVT, and adjusted [odds ratios](#) for age, pre-stroke mRS, National Institutes of Health Stroke Scale ([NIHSS](#)), ICA occlusion, infarct size, [recombinant tissue plasminogen activator](#) (rt-PA) use, and onset-to-hospitalization time were estimated.

EVT patients had significantly lower [hemoglobin](#) levels, higher median NIHSS scores, more [lentiform nucleus infarcts](#), ICA or M1-MCA occlusions, treatment with rt-PA, and fewer M3, M5, or M6 infarcts and M2-MCA occlusions than no-EVT patients. EVT patients had shorter onset-to-hospitalization times and more frequent favorable functional outcomes ($p=0.007$). Mortality, recurrent [ischemic stroke](#), and hemorrhagic infarction were similar in both groups. EVT was associated with significantly better functional outcomes among patients with insular ribbon ($p=0.043$) and M3 ($p=0.0008$) infarcts. M3 patients had significantly fewer rt-PA and EVT, and longer onset-to-hospitalization times.

An occlusion in the [insular ribbon](#) or [M3 region](#) was associated with favorable [functional outcomes](#) in patients treated with [EVT](#) after [cardioembolic stroke](#) ¹⁾.

¹⁾

Oki Y, Sakakibara F, Uchida K, Kageyama H, Yasaka M, Toyoda K, Mori E, Hirano T, Hamasaki T, Yamagami H, Nagao T, Uchiyama S, Minematsu K, Yoshimura S; [RELAXED study](#) group. ASPECTS-Region-Dependent Functional Outcomes after Endovascular Therapy in Patients with Cardioembolic Stroke. J Stroke Cerebrovasc Dis. 2021 Apr 26;30(7):105814. doi: 10.1016/j.jstrokecerebrovasdis.2021.105814. Epub ahead of print. PMID: 33915390.

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