Large vessel occlusion outcome

Higher NIHSS scores correlate with more proximal vascular lesions (larger vessel occlusion causes more widespread deficit).

Intracranial large vessel occlusions account for a large number of acute ischemic strokes and predict poor outcome after stroke and in combined groups of TIA and minor stroke.

Some of the earliest changes in response to ischemic stroke occur in blood gases and electrolytes. These biochemical changes occur within minutes after occlusion in experimental models of stroke and can be utilized to predict stroke outcomes.

The majority of ELVO stroke patients are middle-aged to elderly and are of both sexes, revealing that there is an age and sex mismatch between ischemic stroke patients and animal models, since most experimental studies use young male rats. Rethinking of the animal models should be considered, especially in encouraging the use of aged male and female rats with comorbidities to more closely mirror human populations. Mechanical thrombectomy provides a unique opportunity for researchers to further this work by expanding the collection and analysis of blood samples that are adjacent to the thrombus. To understand the complexity of stroke, researchers can analyze these tissues for different molecular targets that occur in response to ischemic stroke. This information may aid in the reduction of symptom burden for individuals diagnosed with ischemic stroke. Investigators should also focus on data from ischemic stroke patients and attempt to discover target molecules and then in animal models to establish mechanism, which will aid in the development of new stroke therapies.

Future studies are needed to identify molecular targets to predict the risk of worsened long-term outcomes and/or increased risk for mortality ¹⁾.

Older patients undergoing thrombectomy for emergent large vessel occlusion have worse outcomes. However, complete or near-complete reperfusion (modified Thrombolysis in Cerebral Ischemia (mTICI) score of 2 c/3) is associated with improved outcomes compared with partial recanalisation (mTICI 2b).

Increasing age was associated with worse outcomes for those with partial (mTICl 2b) recanalisation, not in patients with complete (mTICl 2c/3) recanalisation ²⁾.

Although tissue plasminogen activator and endovascular treatment were reported to be useful for recanalization in patients with major vessel occlusion (MVO), the outcome in some patients with recanalization was unfavorable.

The ipsilateral-PCA sign and low NIHSS score (≤ 10) were predictors of a favorable outcome in patients with MVO and documented recanalization by treatments ³⁾.

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1)

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