Intracranial revascularization surgery

Outcomes of endovascular revascularization were compared between directly admitted and transferred patients using data from a national database and the Mayo Clinic, Rochester, Minnesota, USA.

118 institutions within the database reported outcomes of 8533 inpatient admissions for endovascular treatment of AIS. Mortality rate (14.9% vs 18.6%; p=0.049) and mortality index (1.1 vs 1.6; p=0.048) were significantly lower among directly admitted patients than among transferred patients. Within our institutional cohort of 140 patients who underwent endovascular therapy, directly admitted patients had a significantly faster time to revascularization than transferred patients (277.4 vs 420.4 min; p≤0.0001). Among transferred patients, an increasing distance of transferred hospital to our home institution was associated with an increasing risk of mortality (unit OR=1.26, 95% CI 1.07 to 1.54; p=0.0061).

Outcomes of revascularization may improve with methods to identify patients with large vessel occlusion before hospital admission, thus increasing the likelihood of initial triage to a comprehensive stroke center for patients eligible for endovascular intervention [1)].

Indications

Intracranial revascularization surgeries are an effective treatment for moyamoya disease and other intracranial vascular obliterative diseases.

see Direct bypass surgery for moyamoya disease.

see cerebral revascularization

Revascularization of the posterior cerebral artery (PCA) can be essential for treating complex cerebral aneurysms in the posterior circulation, and it is considered technically challenging.

1)
Rinaldo L, Brinjikji W, McCutcheon BA, Bydon M, Cloft H, Kallmes DF, Rabinstein AA. Hospital transfer associated with increased mortality after endovascular revascularization for acute ischemic stroke. J Neurointerv Surg. 2016 Dec 16. pii: neurintsurg-2016-012824. doi: 10.1136/neurintsurg-2016-012824. [Epub ahead of print] PubMed PMID: 27986846.