

Chronic ischemic stroke

- [Therapeutic role of caveolin family in stem cell fate and development for management of chronic degenerative diseases: A scientometric study to an in-depth review](#)
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- [From Headache to Heart Health: Investigating the Migraine-Cardiovascular Disease Connection](#)
- [Human induced neural progenitor cells generated from three-dimensional aggregate-based culture significantly improve post-stroke recovery in tMCAO mice](#)

Vagal AS, Leach JL, Fernandez-Ulloa M, et al. The acetazolamide challenge: techniques and applications in the evaluation of chronic cerebral ischemia. *AJNR Am J Neuroradiol.* 2009; 30:876–884

[cerebral hyperperfusion syndrome](#) (AKA [normal pressure hyperperfusion breakthrough](#)): classically thought to result from return of blood flow to an area that has lost autoregulation due to chronic cerebral ischemia typically from high-grade stenosis.

Differentiating between acute and chronic infarction on a CT brain is an important skill for many health professionals particularly in the emergency setting.

pathology acute: cytotoxic oedema chronic: encephalomalacia hypoattenuation acute: more dense than CSF chronic: CSF density mass effect acute: positive (volume gain) sulcal / ventricular effacement midline shift / herniation chronic: negative (volume loss) widened sulci exvacuo dilatation of ipsilateral ventricle

In the chronic stage of stroke, functional recovery reaches a maximum by about 3–6 months, and there is no effective treatment to reduce stroke-related disability beyond this time except for rehabilitation therapy ¹⁾.

Autologous bone marrow derived mononuclear stem cells are safe and feasible in chronic ischemic stroke. Cell therapy with physiotherapy regime led to a trend of improvement in clinical and fMRI scores at 8 weeks as compared to physiotherapy alone and the changes lasted till 24 weeks. Stem cells are proposed to act as ‘Trojan horses’ in the at-risk nervous tissue by stimulation of repair mechanisms leading to behavioral recovery after stroke ²⁾.

Treatment

[Chronic Cerebral Ischemia Treatment.](#)

Case series

50 patients suffering from completed ischemic stroke in the carotid territory for at least two months (17 mild, 31 moderate, 2 severe strokes) underwent extra-intracranial arterial bypass surgery. Neurological improvement was obtained in 43 cases; it persisted in time in 40 cases. Quantitative evaluation of motor performance in 21 patients showed that the degree of improvement was highly significant. Several factors strongly indicate a causal relation between surgical revascularization and neurological restoration. The positive surgical result is strictly dependent on correct patient selection and, in particular: i) on the documentation of local hemodynamic insufficiency; ii) on the occurrence of transient neurological (and to a certain extent EEG) improvement following hyperbaric oxygenation. The latter can also provide reliable information on the minimum degree of improvement to be expected from surgery ³⁾.

Needs Classification

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