

Accepted Manuscript

Title: The application and neuroprotective mechanisms of cerebral ischemic post-conditioning: a review

Authors: Zhixing Li, Hanlin Chen, Jinglei Lv, Renliang Zhao

PII: S0361-9230(17)30038-2

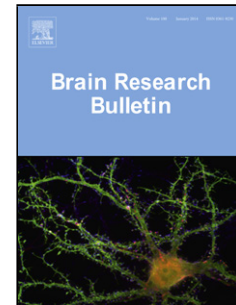
DOI: <http://dx.doi.org/doi:10.1016/j.brainresbull.2017.03.002>

Reference: BRB 9181

To appear in: *Brain Research Bulletin*

Received date: 24-1-2017

Accepted date: 6-3-2017



Please cite this article as: Zhixing Li, Hanlin Chen, Jinglei Lv, Renliang Zhao, The application and neuroprotective mechanisms of cerebral ischemic post-conditioning: a review, *Brain Research Bulletin* <http://dx.doi.org/10.1016/j.brainresbull.2017.03.002>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

The application and neuroprotective mechanisms of cerebral ischemic post-conditioning: a review

Zhixing Li¹, Hanlin Chen¹, Jinglei Lv², Renliang Zhao²

¹ Qingdao University Medical College, 38 Dengzhou Road, Qingdao 266000, China

² Department of neurology, the Affiliated Hospital of Qingdao University, 16 Jiangsu Road, Qingdao 266003, China

Corresponding author: Renliang Zhao, MD, Chief physician, Professor, Department of Neurology, the Affiliated Hospital of Qingdao University, 16 Jiangsu Road, Qingdao 266003, Shandong Province, China, zhrenliang@163.com

Highlights

- An induction of cerebral ischemic post-conditioning and a systematic classification of its application ways are proposed.
- This review comprehensively summarizes neuroprotective mechanisms of cerebral ischemic post-conditioning.
- This review sums up experimental application ways and clinical translation hurdles of cerebral ischemic post-conditioning.

Abstract

Ischemic stroke is a serious cerebrovascular disease that leads to death and/or severe disability, and extensive research has been directed in search of appropriate treatment measures. One such potential treatment is the use of cerebral ischemic post-conditioning (IPostC), and its neuroprotective effects and controllability have been widely confirmed and validated. Numerous studies have indicated that cerebral IPostC can suppress the inflammatory reaction in ischemia reperfusion injury, improve cerebral circulation, reduce infarct volume, and promote both neurogenesis and angiogenesis. The neuroprotective mechanisms underlying IPostC have been systematically studied, but still need a comprehensive summary and a more exhaustive understanding. Continuing research has proposed further applications of IPostC, including remote ischemic post-conditioning, pharmacologic ischemic post-conditioning, and delayed ischemic post-conditioning. However, most studies of IPostC are performed on animal models, and clinical studies are scarce. Therefore, future studies will need to focus on increasing our understanding of neuroprotective mechanisms underlying cerebral IPostC as well as accelerating its clinical translation.

Download English Version:

<https://daneshyari.com/en/article/5736253>

Download Persian Version:

<https://daneshyari.com/article/5736253>

[Daneshyari.com](https://daneshyari.com)