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Mini-Review Article

Neuronal Recovery Promotion as a Therapeutic Method to treat Stroke

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Abstract

Stroke is a common pathology which can be seen in the neurology departments. Finding novel treatment methods to treat stroke is of great importance in clinical settings. This is a brief review on the Neuronal recovery promotion as a therapeutic method to treat the patients with various degrees of stroke.

Keywords: neuronal recovery; therapeutic method; stroke; nutritive; signaling; bFGF

Introduction

Stroke is a common pathology which can be seen in the neurology departments. Finding novel treatment methods to treat stroke is of great importance in clinical settings. This is a brief review on the Neuronal recovery promotion as a therapeutic method to treat the patients with various degrees of stroke.

Body

Self-repair promotion in the damaged neurons and promoting healthy neurons growth, are two main strategies to compensate the neuronal loss which has been occurred during stroke. These strategies can be named " nutritive " and " signaling " ones.

Nutritive strategy provides neurons with the necessary molecules which they need for growth and repair. Signaling strategy provides essential instructive growing chemical signals for neurons.

Citicoline as a phospholipid precursor and an important intermediate in the phosphatidylcholine biosynthesis can be used in the nutritive strategy during neuronal recovery promotion.

basic Fibroblast Growth Factor or bFGF as a neurotrophic factor can be used for restorative therapy. There should be more studies to be done before using such neurotrophic factors like bFGF in human.

Animal studies show reduction in the volume of infarct by administering bFGF in a short period after focal ischemia onset. According to the animal studies, bFGF cannot reduce the volume of the infarct, if it is administered in a time after 24 hours from the ischemia onset although, behavioral tests show outcome improvement by bFGF administration even after 24 hours from the ischemia onset.

Conclusions

Neuronal recovery promotion can be used as a therapeutic method to treat stroke. There should be more studies to be done about neuronal recovery promotion strategies specifically about using neurotrophic factors since the results can open new doors to treat stroke patients much more effectively with achieving better clinical results.

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