The 1st International Neuroinflammation Congress
and 1st Student Festival of Neurosience

Shefa Neuroscience Research Center, Tehran, Iran, 11-13 April, 2017

The Neuroscience Journal of Shefaye Khatam

Volume 5, No. 2, Suppl 2

Poster Presentation

Neuroinflammation and Nanomedicine,How about Cerebral Palsy

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Published: ***11 April, 2017***

Abstract

Cerebral palsy (CP) is the most common motor disability in children, usually occurring during fetal development; before, during, or shortly after birth, or during infancy. CP takes place in about 2.1 per 1,000 live births .There is no exact reason but birth injury or inflammation of the central nervous system, infections and hypoxia are related risk factors of this disease. Often, symptoms include poor coordination, stiff muscles, weak muscles, and tremors and they may have impairment of sensation, vision, and hearing, swallowing, and speaking. .In fact treating CP is complex, but in some ways like nanomedicine we can manage the treatment and attenuating the symptoms. Nanomedicine is a branch of medicine that uses nanoparticles and nanodevices like dendimers in diagnosis and treatment of diseases. One of them is neurodegenarative diseases that are always accompaind by neuroinflammation. There is a blood brain barrier (BBB) in CNS to prevent entering micro organisms or something like drugs so we need something to overcome this barrier (BBB) and start diagnosis or treatment of diseases like CP. The aim of this study is looking into the use of nanomedicine in CP and providing a new way without any side effect for treatment of CP. Studies on animal models show that by nanomedicine we can overcome BBB, make drugs available and treat just the area of the brain that is involved in CP , also we can apply it for diagnosis but in some studies there was a toxic effect of nonomaterial so it is offered we can make new particles or devices by material from our own body that can be absorbed fast but with out any side effect or any change in its structure when it is binded to drugs to get the best effect and generalize it for human.

Keywords: Cerebral palsy, Nanomedicine, Blood brain barrier

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