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

Effect of Curcumin on Microglial Cells in MS

Sara Abbassi*

Student Research Committee, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran

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

Abstract

Multiple sclerosis (MS) is the most common autoimmune disease, especially among young's. Neuroinflammation results from inflammation in CNS and it may cause different disorders and diseases .It is also known as a detriment in multiple sclerosis. In fact, it causes problems and symptoms in MS. In MS the self-immune cells attack the myelin of neurons, it maybe the nerve in brain or spinal cord. Demyelination causes inflammation in the area and activation of the microglial cells. Microglial cells (macrophages in nervous system) protect nervous system and they are also important in neuroinflammation especially in autoimmune condition. Microglial cells can cause inflammation in MS in these ways: Presenting of neural autoantigens to autoreactive T cells, Secreting of proinflammatory cytokines.) TNF-alpha, IL-1 beta, IL-6), increasing permeability of blood vessels, releasing nitric oxide (NO). Anti-inflammatory drugs can decrease symptoms of MS. As we know Curcumin or diferuloylmethane is a yellow pigment and principal curcuminoid of turmeric. Anti-inflammatory properties of curcumin are obtained by the control of secretion nitric acid through decreasing the level of MRNA and protein producing nitric oxide and restraining LPS that result in releasing cytokines. Regulating inflammatory cytokines such as IL-1beta, IL-6, IL-12, TNF-alpha and IFN-gamma and associated JAK-STAT, AP-1, and NF-kappaB signaling pathways in immune cells are decreased by curcumin. The purpose of this study is to suggest that turmeric can be as a natural herbal drug for inflammatory diseases like MS. According to the evidences , we can say turmeric, which contains curcumin can use as a prevention in MS or any diseases with inflammation like autoimmune diseases and Curcumin as an herbal matter has anti-inflammatory effects especially on microglial cells so it can be considered as a benefit dietary factor in patients with MS.

Keywords: Neuroinflammation, MS, Curcumin, Microglia

Corresponding Author: Sara Abbassi

E-mail: *maah.titi.1997297@gmail.com*

[Downloaded from shefayekhatam.ir on 2026-09-09]