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Poster Presentation

Nano-Phytosome of Curcumin Improve Behavioral Impairment on Carrageenan-Induced Acute Inflammation Model in Mice

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Abstract

Inflammatory disorders alone or as a consequence of neurological disease affecting patients in life. Experimental models of inflammation are use to evaluate the production of inflammatory mediators at site of inflammation. Curcumin is one of the flavonoids possesses potent anti-inflammatory activity. However, because of low water solubility curcumin, its clinical application has been limited. The present study attempts to assessment the effects of curcumin and nano-phytosome of curcumin on improve of behavioral impairment and reduce inflammation cytokines in carrageenan-induced inflammation model. Animals have received oral administration of curcumin or nano-phytosom of curcumin at dose of 15 mg/kg for 7 days before injection of carrageenan. Acute inflammation was induced by injection of carrageenan (1%,) into the subplantar region of left paw in mice. Tail pinch test and hotplate test (for evaluated the threshold of neuroinflammation pain) were performed on ½ h before injection and ½ h, 2 h, 24 h after injection of carrageenan. The results of behavioral testes showed enhance of antinociceptive effects in the animals recieved curcumin($p \leq 0.01$) and nano-phytosome of curcumin ($p \leq 0.001$) compaired to other groups. These results suggested that curcumin and its nano-phytosome improvement behavioral impairment and reduce inflammation cytokines following local injection of carrageenan.

Keywords: Carrageenan, Inflammation, Nano-Phytosome of Curcumin, Inflammation Cytokines

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