

عنوان مقاله:

Effects of Mesenchymal Stem Cells Conditioned Medium on Behavioral Aspects of Inflammatory Arthritic Pain
Induced by Complete Freund's Adjuvant

محل انتشار:

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خلاصه مقاله:

Background: Rheumatoid arthritis is a type of inflammatory pain and is an autoimmune and chronic inflammatory disease which can lead to hyperalgesia, edema and decreased motor activity in affected area. Mesenchymal stem cells conditioned medium (MSC-CM) has anti-inflammatory mediators which can regulate the immune responses, alleviate inflammatory symptoms and has a paracrine effects too. The aim of this study was to evaluate the effects of mesenchymal stem cells conditioned medium on behavioral aspects of inflammatory arthritic pain which induced by Complete Freund's adjuvant (CFA). Materials and Methods: Complete Freund's adjuvant-induced arthritis (AA) was caused by single subcutaneous injection of CFA into the rat's hind paw on day zero. MSC-CM was administered daily and intraperitoneal during the 21 days of the study after CFA injection. Hyperalgesia and edema were assessed on days 0, 7, 14 and 21 of the study respectively with radian heat and plethysmometer instrument. Results: The results of this study indicated the significant roles of MSC-CM in betterment of inflammatory symptoms such as hyperalgesia and edema during different stages of inflammation caused by CFA. The continuing injection of MSC-CM could reduce the inflammatory symptoms. Conclusion: Long term treatment by MSC-CM can alleviate hyperalgesia and edema and decrease those to the level of the time before induction of inflammation.

کلمات کلیدی:

Inflammation, Pain, Hyperalgesia, Edema, MSC-CM

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