Delayed Imatinib Treatment for Spinal Cord Damage; Role of Serum Biomarkers and Recovery

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Abstract

With no routine accessible medicine intervention for spinal cord damage, there is a demand for more remedial candidates. However, for Imatinib to have translational price, it requires to have encouraged obliging effects with delayed start of treatment, as well. Serum levels of 3 chemokines/cytokines, MIP-3α, MCP-1, and GRO/KC (IL-8), to raise over time with Imatinib treatment and to be obviously higher in damaged Imatinib treated animals than in manages pending the early treatment period. Lymphoid organs, first the spleen, were tested to supply information on systemic effects of Imatinib with consider to inflammatory responses and lymphoid organs as the source of monocyte/macrophage infiltration into the damage site of the spinal cord. Serum samples at one, three and seven days after damage were tested for INF-1β, MIP-3α, MCP-1, IL-2, IL-4, IL-5, IL-6, IL-10, IL-13, GRO/KC and TNF. Three cytokines/chemokines, MIP-3α, MCP-1 and GRO/KC demonstrated definite potential as biomarkers in serum. Serum levels of MIP-3α and MCP-1 remained elevated in the damaged and sham damaged group throughout the seven days in comparison to concentrations in uninjured managements.

Keywords: Spinal Cord Damage, Serum Biomarkers, Chemokines, Treatment

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