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Mesenchymal stem cells in clinical applications

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Mesenchymal stem cells (MSCs), multipotent adult stem cells feature the potential to regenerate tissue damage and inhibit inflammation. Our research studies designed to measure the safety and efficacy of intra-venous, intra-articular, and intra-thecal stem cell therapies. Retrospective Chart Review study of umbilical cord blood (UCB) stem cell therapy for spinal cord injury showed that significantly higher proportion of patients in the stem cell therapy group showed improved function in pain and temperature sensation, lower limb muscle strength, bladder and gastrointestinal function compared to the traditional therapy group. UCB stem cell therapy of patients with Sequelae of cerebro-vascular hemorrhage and CVA (Stroke) Sequelae showed significant improvement in mobility and muscle strength of upper and lower extremities, improvement of neurological function. In the period from 2015 to 2016, 207 subjects with musculo-skeletal conditions underwent the therapy with their own stromal vascular fraction cells. Analysis of subjects' pain sensation and mobility showed the following: 10 days after the therapy, pain sensation decreased by 26.8%. Three months after therapy, the number of subjects with a decrease in pain sensation increased to 50.0%, and six months later, this number was 52.5%. Analysis of subjects' mobility showed the following: 10 days after the therapy, mobility was improved by 26.0%. Three months after therapy, the number of subjects with improved mobility increased to 43.8%, and six months later this number was 47.4%. Statistical analysis showed that the decrease in subjects' pain sensation and improvement of subjects' mobility three and six months after the therapy was statistically significant.

Biography

Brian M Mehling is a practicing American Orthopedic Trauma Surgeon, Researcher, and Philanthropist. He started his path in Medicine through Undergraduate study at Harvard University, obtaining Bachelor of Arts and Master of Science degrees in Biochemistry from Ohio State University. Completing his degree of Medicine at Wright State University School of Medicine, he received Post-graduate education through residencies and fellowships at St. Joseph's Hospital in Paterson, NJ and the Graduate Hospital in Philadelphia, PA, while pursuing a Ph.D in Chemistry. He operates his own practice, Mehling Orthopedics, in both West Islip, NY and Hackensack, NJ.

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