TRANSPLANT OF AUTOLOGOUS BONE MARROW STEM CELLS INTO PARKINSON`S DISEASE PATIENTS IS SAFE AND MAY IMPROVE THEIR QUALITY OF LIFE

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There is not yet a cure or definitive treatment for Parkinson`s disease (PD). Studies in PD patients show that for a treatment to be effective it must primarily improve their quality of life, avoid adverse side effects and attenuate the progression of the disease. Many studies support that stem cells may be an alternative treatment for different disease and trauma states. Furthermore, autologous CD34+ stem cells have been used to mitigate symptoms of leukemia, cardiomyopathy, spinal cord injury, diabetes, and several neurodegenerative diseases including multiple sclerosis and amyotrophic lateral sclerosis. For the first time, we report 8 non-surgical, minimally invasive transplants to PD patients who were administered autologous bone marrow stem cells (BMSCs) via multiple routes. Preliminary evaluations show improvements in UPDRS, Hoehn & Yahr scale, Schwab & England scale, reduction in current medication total dosage and prolonged span between doses. No motor complications or impairment were seen. To date, we have administered autologous BMSCs into 131 patients including this group of PD cases. No tumor formation, pain, infections or rejection reactions were seen up to 5 years follow up. This study suggests BMSCs may induce dopamine synthesis which may explain the better response to standard drug therapy. BMSCs administration via multiple routes is feasible, safe, and may improve the quality of life for patients living with PD. This study meets the Position Statement Regarding the Use of Embryonic and Adult Human Stem Cells in Biomedical Research of the American Academy of Neurology and American Neurological Association.