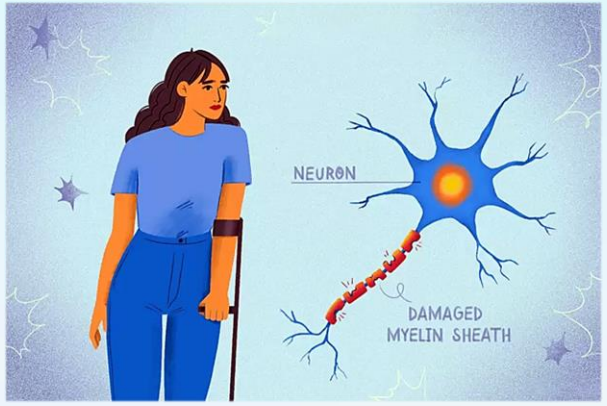
Stem Cell Care India

A GUIDE FOR PATIENTS

LITERATURE

Scan to open the literature page

❖ Multiple Sclerosis



➢ The potential use of mesenchymal stem cells for the treatment of multiple sclerosis

Multiple sclerosis (MS) is a chronic autoimmune inflammatory disease of the central nervous system (CNS). In attempt to identify an appropriate treatment for improving the neurological symptoms and remyelination process, autologous and allogenic transplantation of mesenchymal stem cells (MSCs) have been introduced as an effective therapeutic strategy in MS. MSCs are a heterogeneous subset of pluripotent non-hematopoietic stromal cells that are isolated from bone marrow, adipose tissue, placenta and other sources. MSCs have considerable therapeutic effects due to their ability in differentiation, migration, immune-modulation and neuroregeneration. To date, numerous experimental and clinical studies demonstrated that MSCs therapy improves the CNS repair and modulates functional neurological symptoms. Here, we provided an overview of the current knowledge about the clinical applications of MSCs in MS. Furthermore, the major challenges and risks of MSCs therapy in MS patients have been elucidated

Read more ⇨

➢ Mesenchymal stem/stromal cells as a valuable source for the treatment of immune-mediated disorders

Over recent years, mesenchymal stem/stromal cells (MSCs) and their potential biomedical applications have received much attention from the global scientific community in an increasing manner. Firstly, MSCs were successfully isolated from human bone marrow (BM), but in the next steps, they were also extracted from other sources, mostly from the umbilical cord (UC) and adipose tissue (AT). The International Society for Cellular Therapy (ISCT) has suggested minimum criteria to identify and characterize MSCs as follows: plastic adherence, surface expression of CD73, D90, CD105 in the lack of expression of CD14, CD34, CD45, and human leucocyte antigen-DR (HLA-DR),.

Read more ⇨

➢ The Potential of Human Umbilical Cord-Derived Mesenchymal Stem Cells as a Novel Cellular Therapy for Multiple Sclerosis

Multiple sclerosis (MS) is a complex disease of neurological disability, affecting more than 300 out of every 1 million people in the world. The purpose of the study was to evaluate the therapeutic effects of human umbilical cord-derived mesenchymal stem cell (hUC-MSC) transplantation in MS patients. Twenty-three patients were enrolled in this study, and 13 of them were given hUC-MSC therapy at the same time as anti-inflammatory treatment,

whereas the control patients received the anti-inflammatory treatment only.

Read more ⇨

➢ Mesenchymal Stem Cells in Multiple Sclerosis: Recent Evidence from Pre-Clinical to Clinical Studies

Multiple sclerosis (MS) is an autoimmune, demyelinating disease of the central nervous system. Nowadays, available therapies for MS can help to manage MS course and symptoms, but new therapeutic approaches are required. Stem cell therapy using mesenchymal stem cells (MSCs) appeared promising in different neurodegenerative conditions, thanks to their beneficial capacities, including the immunomodulation ability, and to their secretome. The secretome is represented by growth factors, cytokines, and extracellular vesicles (EVs) released by MSCs. In this review

Read more ⇨

➢ Mesenchymal Stem Cells and Induced Pluripotent Stem Cells as Therapies for Multiple Sclerosis

Multiple sclerosis (MS) is a chronic, autoimmune, inflammatory demyelinating disorder of the central nervous system that leads to permanent neurological deficits.

Current MS treatment regimens are insufficient to treat the irreversible neurological disabilities. Tremendous progress in the experimental and clinical applications of cell-based therapies has recognized stem cells as potential candidates for regenerative therapy for many neurodegenerative disorders including MS. Mesenchymal stem cells (MSC) and induced pluripotent stem cell (iPSCs) derived precursor cells can modulate the autoimmune response in the central nervous system (CNS) and promote endogenous remyelination and repair process in animal models. This review highlights studies involving the immunomodulatory and regenerative effects of mesenchymal stem cells and iPSCs derived cells in animal models, and their translation into immunomodulatory and neuroregenerative treatment strategies for MS.

Read more ⇨

➢ Clinical feasibility of umbilical cord tissue-derived mesenchymal stem cells in the treatment of multiple sclerosis

Multiple sclerosis (MS) is a progressively debilitating neurological condition in which the immune system abnormally erodes the myelin sheath insulating the nerves. Mesenchymal stem cells (MSC) have been used in the last decade to safely treat certain immune and inflammatory conditions.

Read more ⇨

➢ Mesenchymal Stromal Cell Therapies for Neurodegenerative Diseases

Mesenchymal stromal cells are multipotent cells that are being used to treat a variety of medical conditions. Over the past decade, there has been considerable excitement about using MSCs to treat neurodegenerative diseases, which are diseases that are typically fatal and without other robust therapies. In this review, we discuss the proposed MSC mechanisms of action in neurodegenerative diseases, which include growth factor secretion, exosome secretion, and attenuation of neuroinflammation. We then provide a summary of preclinical and early clinical work on MSC therapies in amyotrophic lateral sclerosis, multiple system atrophy, Parkinson's disease, and Alzheimer's disease. Continued rigorous and controlled studies of MSC therapies will be critical in order to establish efficacy and protect patients from possible untoward side effects.

Read more ⇨

➢ Safety and efficacy of stem cell therapy for treatment of neural damage in patients with multiple sclerosis

Multiple sclerosis (MS) is a multifocal inflammatory disease that involves the central nervous system and associated with limbs paralysis and serious problems in sensation, limbs, visual and sphincter. This disease is a result of autoimmune mechanism in which autoantibodies target the self-myelin antigens and cause demyelination. Because of the myelin dysfunction, MS is clinically identified with neurological disabilities. Furthermore, it can be entered into the progressive phase because of irreversible neurodegeneration and axons damage.

Unfortunately, there is no effective therapeutic method for this disease and current medications have been focused on amelioration of symptoms and chronic inflammation. Although current immunotherapies ameliorate the reactivity of autoimmune anti-myelin and MS relapse rate, there is no approved method for improvement of the disease progression and repairing of the damaged myelin. Therefore, finding an appropriate clinical treatment for improvement of neurological damages in MS patients is essential.

Read more ⇨

- **IV/IT hUC-MSCs Infusion in RRMS and NMO: A 10-Year Follow-Up Study**

Stem cell transplantation is emerging as a potential therapeutic strategy in several autoimmune diseases. However, the safety and feasibility of long-term combined intravenous (IV) and intrathecal (IT) administration of hUC-MSCs in relapse remitting multiple sclerosis (RRMS) and neuromyelitis optica (NMO) is largely unknown.

Read more ⇨

- **Autologous mesenchymal stem cells for the treatment of secondary progressive multiple sclerosis: an open-label phase 2a proof-of-concept study**

More than half of patients with multiple sclerosis have progressive disease characterised by accumulating disability.

On the basis of evidence that mesenchymal stem cells have a beneficial effect in acute and chronic animal models of multiple sclerosis, we aimed to assess the safety and efficacy of these cells as a potential neuroprotective treatment for secondary progressive multiple sclerosis.

Read more ⇨

➢ Stem cell-based therapies for multiple sclerosis: recent advances in animal models and human clinical trials

Multiple sclerosis (MS) is an inflammatory demyelinating disease of the CNS, widely regarded to be autoimmune in nature, and a leading cause of disability among adults aged 20–40 years. Most patients present with a relapsing remitting profile, in which inflammatory flare-ups are interspersed with periods of baseline function.

Read more ⇨

➢ Use of stem cells for the treatment of multiple sclerosis

The reported evidence of neurodegeneration in multiple sclerosis (MS) may explain the lack of efficacy of the currently used immunomodulating modalities and the irreversible axonal damage, which results in accumulating disability. To date, efforts for neuroprotective treatments have not been successful in clinical studies in other CNS diseases. Therefore, for MS.

Read more ⇨

➢ The role of stem cell therapy in multiple sclerosis: An overview of the current status of the clinical studies

The complexity of multiple sclerosis (MS) and the incompetence of a large number of promised treatments for MS urge us to plan new and more effective therapeutic approaches that aim to suppress ongoing autoimmune responses and induction of local endogenous regeneration.

Read more ⇨

Stem Cell Care India

Stem Cell Care India

Scan to schedule a free consultation

https://www.stemcellcareindia.com/

info@stemcellcareindia.com

International Patients: +918743024344
Indian Patients: +91 7838223336

STEM CELL CARE INDIA - YouTube

https://www.instagram.com/stemcellcareindia/

https://www.facebook.com/StemCellCareIndia

https://twitter.com/StemCellCare