

Spinal Muscular Atrophy



Overview

It is projected that spinal muscular atrophy affects one in 7000 babies born and that about one in 50 individuals are hereditary carriers of the disease. SMA is an autosomal recessive genetic malady which means that maximum cases of SMA can be attributed to getting substandard genes from both parents. It is believed that if both parents are carriers of this hereditary disorder to chance of the child developing this illness is 25%. Potential parents can use genetic testing to see if they are carriers of this gene though PGD pre-implementation genetic diagnosis testing that is available in maximum nations around the world. There are 4 kinds and classifications of SMA disease

- ❑ SMA type I which is the most severe type is also acknowledged as Werdnig-Hoffman disease.
- ❑ SMA type II is less severe than type I asked patients normally infants do not show symptoms of SMA during early embryonic stage however over time they become weaker and weaker.
- ❑ SMA type III is less severe form and normally starts in early adulthood and gradually gets worse as the patient's age.
- ❑ SMA type IV is the least severe category of the disease where weakness and muscle wasting usually begin in adulthood.

Because of its genetic nature, there is no perpetual cure for this disease. Neural stem cell transplants and gene therapy are presently the most effective treatment options for control and remission of spinal-muscular atrophy.

Symptoms

Muscle atrophy	Muscle weakness	Areflexia	Trouble Breathing	Thin muscle mass	Trouble eating or swallowing	Deficiency of head and neck control
Involuntary facial twitching	Atrophic muscle changes	Muscle trembling	Sensory neuropathies	Trouble sitting up or walking or crawling (infants)	Thin muscle mass	Missing tendon reflexes
		Fasciculations	Clubfoot	Impotency,ED and/or reduction in sexual potency		



Cause

It is Genetic issue. It is a twofold passive autosomal disorder (5q-SMA) It is brought about by transformations in the SMN1 (endurance engine neuron) quality that is found on chromosome 5 (thus the name 5q). To create SMA, an individual must acquire two defective SMN1 qualities, one from each parent

Diagnosis



- Blood test
- Genetic test
- Nerve conduction test:
- Muscle biopsy

Adverse Reaction

We comprehend that patients might have apprehensions about adverse reactions to the treatment. Possible side-effects of stem cell therapy may differ from individual to individual; any complications depend upon the type of processes you are undergoing.

Side-effects experienced by our patients are consistent with predictable reactions for routine IV and LP injections. The most common reactions to the treatment are fever, headache, diarrhea, leg pain, vomiting and allergic reactions. Less than four percent of patients experience any of these signs.

The most common reactions to the stem cell treatment are:

Fever

Headache

Leg Pain

Diarrhea

Vomiting

Allergic reactions



Stem Cell Care
India

Treatment Procedure

The Stem Cell Care India offers a very safe and non-invasive treatment protocol and procedure. The patients can travel the next day. The following is the day-wise schedule for the patients.

Day 1-

- Pick up from the Airport to the Hospital
- Interaction between Dr and Patient, to clear all their doubts at that time
- Admission procedure
- Clinical examination & Lab test will be done prescribed by the doctor

Day 2-

- Stem cell Procedure
- Supportive therapies
- Physiotherapy

Day 3-

- Supportive Therapy
- Physiotherapy
- Discharging formalities
- Drop back to the Airport



Meeting at the Airport



International Patient Facilities

Quote/treatment plan
Complimentary airport pick up
Scheduling of all medical appointments
Cost estimates for anticipated treatment

Visa assistance letter
Dedicated guest relation officers
Coordination of the admissions process



Treatment

The majority of the cases of AMD involve the slow-developing type of AMD, called dry AMD. Currently, as of 2020, there are no treatment options available for dry AMD, but some promising new therapies are in it. The slow-developing form of AMD, called dry AMD, constitutes the majority of AMD cases. There are no treatment options currently available for dry AMD as of 2022, but some exciting new treatments are in the pipeline.

For all aspects of medicine today, including multiple cases of cancer, as well as for dry AMD, stem cell treatment is gaining momentum. The aim of stem cell treatment for AMD is to be able to replace retinal cells that have been damaged or killed by symptoms with new stem cells.

Stem cells are also inserted, through IV infusion, into the blood supply of the body. But, experts are focusing on how the stem cells can be transplanted directly into the eyes. One strategy involves placing the stem cells into a fluid suspension that can be injected under the retina

We use the unique technology of Mesenchymal stem cells extracted from Wharton's jelly (WJ) for treating MS. WJ-MSCs offer remunerative and budget friendly favorable treatment for tissue engineering purpose. An optic nerve stem cell regeneration aids this and more. They might help in the three peculiarly prominent ways – prevent damage, repair damage and develop new medicines.

The treatment will take place in multiple steps comprising of the following.

- **Qualification for the treatment:** Our experts will assess all your past medical history and symptoms to examine and correctly judge the severity of your condition. A series of tests will be performed to gain a knowledge of the stage of disease. As per the test results, our experts will counsel the patient for further process of the procedure.
- **Source Extraction:** With guidance and approval from the physician, the source of extraction will be decided. In general, WJ-MSCs are the most potent allogenic sources available. Stem cells from a healthy person (the donor) are transferred to the patient's body. A bone marrow donor is considered for allogenic stem cell transplantation. A scraping from the inside of the patient and his or her sibling's cheek is tested to determine tissue type. An expert will examine to identify Human Leukocyte Antigens (HLAs). If the HLA on the donor cells are identical or similar, the transplant is more likely to be successful. Stem cell for optic nerve atrophy is promoted to aid patients suffering from similar kind of ailment.
- **Laboratory Processing:** The extracted samples will be sent to government approved cGMP laboratory for processing. The sample manipulation will take place in a state-of-the-art facility in compliance with the ISO and GMP standards and using the latest technologies. The client will receive a third party certificate from an internationally accredited lab for quality purpose. An optic nerve stem cell therapy provides just that and more.
- **Stem Cell Implantation:** Once the stem cells are ready to be implanted, the doctor will identify the most potent method of infusion based on the patient's physical and mental well-being. The only limitation of the allogenic stem cell treatment is that this procedure carries the risk of developing Graft vs. host disease (GVHD), wherein the patient's body rejects the donor stem cells. Human leukocyte antigens (HLA) can help minimize the risk of any side effects. In this procedure, the HLA of the patient and the donor are primarily matched as closely as possible.
- **Stem cell treatment Aftercare:** The patients will be asked to visit the doctors for evaluation. You will be provided counselling for speedy recovery and also kept on check to ensure that no side effects affect the human body.



Mechanism

Stem cells can help restore the weakened retina and can contribute to a complete halt in the process of loss of vision, thus enhancing the general quality of life of humans. The new doors to the cure and changes in Macular Degeneration patients have been opened through Stem Cell Therapy.

Program for Stem Cell Therapies to treat multiple diseases. Each patient receives 200-300 million stem cells during the stem cell procedure. Not only does the sum of stem cells compensate everyday losses, but it beats them by a million times. The stem cell source, which has basically been missing for the last 15 to 20 years, is thus retrieved and revived. Different organs get rejuvenated following our stem cell injection, and they get revived when the new and activated stem cells replace the old ones fully.

Introduced into the retrobulbar space, stem cells may start to work on damaged tissue and begin to rejuvenate the optic fibers and retinal cells. Photoreceptors and other cells can be differentiated from mesenchymal stem cells. It is possible to use segregated stem cells to treat tumors in the macular and retinal cells.

- ❑ • There are three stem cell classes that vary, based on their position in the body and their potency (the ability to develop in different cell lines). Ophthalmologist performs experiments on both of these classes. Embryonic stem cells (ESCs) are cells that are found at an early stage of development in the inner cell mass of an embryo. ESCs are pluripotent, meaning that in the course of growth they will become any cells.
- ❑ Fetal stem cells. Following an abortion or from cord blood, this community of cells is removed from the fetus. Fetal SCs have greater functionality than adult SCs and are pluripotent. Such cells exhibit increased recovery rates of photoreceptors and are capable of sustained doubling during cultivation. Their use, however, is often synonymous with ethical concerns. Study on fetal cells is banned by law in many countries worldwide.
- ❑ Adult stem cells, found in mature tissues, are immobile and non-specialized cells. Adult SCs collaborate with new ones to replace dead cells and facilitate tissue regeneration. Nonetheless, they create a microenvironment for tissues, shield them from degeneration (destruction), and also have the capacity to self-renew and create mature cells. Hematopoietic stem cells, mesenchymal stem cells, and neural stem cells may be differentiated by multiple forms of SCs.
- ❑ Relevant antigens, which are a common cause of incompatibility between donor tissues and the recipient during transplantation, are still not generated. ESCs may be useful in managing retina degenerative disorders, retinal pigment epithelium pathologies, and optical neuropathies. Research on ESCs is banned at the regulatory level in many countries, as their extraction from the embryo interrupts its further production.

Patient Testimonials

Debra J. Ruiz

My son was diagnosed with Spinal Muscular Atrophy and I was shattered. I consulted with various doctors and finally found Stem Cell Care India. Their doctors helped me get my son treated conveniently and at a very affordable cost. Currently, he is doing much better. Thank you Team SCCI.

Thomas Garner (Schoonhoven)

My daughter has spinal muscular atrophy, a rare and life-threatening disease, and the only way to help her is with stem cell treatment. The treatment in the US costs a fortune; however, in India, my daughter can get the treatment for a fraction of the cost. So we found a clinic that offers the stem cell treatment of spinal muscular atrophy to people from all over the world including the US. I am so thankful for this treatment because now my daughter's condition has improved a lot.

Tushar Singh (Lucknow)

This treatment has helped my son a lot. He is able to stand and walk without support. He is able to eat without any help. The treatment was safe and effective. He had no side effects.





SARMAD JUTYAR BABANI
Came from Australia, Neuropathy Treatment

Two years ago, I was diagnosed with lower disc issues. Treatment options ranged from physiotherapy to pills. It only provided short alleviation. After considerable investigation, I discovered that India offers stem cell therapy. Upon my arrival, I began receiving medical care. I'm relieved, and I hope it lasts.

PATIENT STORY

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MAST. JENISH DUDHAGARA
Came from Gujrat for Lennox Gastaut Syndrome/
Developmental Delay Treatment

When my child was 2 days old he suffered from Hypoglycemia because of which he suffered from seizures. After 10 days he recovered and then when he was 7 months old the seizures returned. About 120 jerks in cluster of 25-30 seizures in a month were a daily occurrence. Due to seizures overall development was delayed. 1 year ago he underwent surgery but still no improvement. We now lay our trust in stem cell therapy to reverse the damage happened.

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Improvement

It's frightening to envision a life without a clear central goal, but there's reason to be hopeful. Doctors are also searching at ways to improve patients with this condition, and they're researching experimental therapies that may one day be used as a therapy. For instance, stem cell development is currently ongoing, with the potential to lead to a cure in the future.

Before these groundbreaking therapies become a reality, it's important to speak with an experienced doctor who will guide you through current procedures for the type of macular degeneration you have already. We have physicians available to work with you, and our doctors will use cutting-edge procedures to keep your eyes as healthy as possible. Patients' effects have changed as a result of stem cell therapy provided by Stem Cell Treatment India.

Our Promise

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Post Treatment Care

Postoperative care

The stem cell therapy does not damagingly affect patients in any way. Generally, the patients are permitted to leave after few hours after the completion of the stem cell treatment. A 24-hour patient hotline number is there for any inquiries after their discharge. The concerned physicians or surgeons of the clinic also stay in contact with their corresponding patients through telephone or email. By doing this, they can get the precise feedback about their progress and also suggest further recovery if required. Say for example, in case of a diabetic patient, after hearing about the patient's present symptoms, the concerned doctor can recommend the needed dosage of insulin.

Treatment disclaimer

It is an imperative fact to comprehend that stem cell treatment in every prospect has the ability to diminish symptoms of numerous diseases. It also has the aptitude of ceasing several degenerative procedures, but one should also know that this treatment may not work for all kinds of patients. StemCellCareIndia does not have the right of forecasting or warranting the success of this treatment.

In harmony to the current condition of a patient, the medical team of StemCellCareIndia might propose the stem cell transplantation or may even withdraw the treatment under abnormal situations. However, in any case, the approval of the patient is a must. Keeping the patient's current health condition and unforeseen health hazards in mind, the medical staff might propose an alternative stem cell transplantation process. In exceptional situations, they may entirely cancel the treatment.



What Happens When You Have SMA?

The nerves that regulate muscle strength and movement deteriorate in SMA. The spinal cord and the bottom portion of the brain contain these nerves (known as motor neurons). They are unable to transmit messages from the brain to the muscles, which would allow them to move. When the muscles aren't used, they shrink (or atrophy).

What are the causes of SMA?

The majority of cases of SMA are affected by a mutation in the SMN1 gene. The gene does not produce enough of a protein required for proper motor neuron function. Motor nerves die and are unable to transmit signals to the muscles.

Each parent gives one copy of the SMN1 gene to a child with SMA. A child who inherits the SMN1 gene from only one parent is unlikely to develop SMA, but he or she will transfer the gene on to their children.

People with SMA and their parents will get their genetics tested to see how likely they are to have a child with SMA.

What Are the Symptoms and Signs of SMA?

SMA manifests itself in a variety of ways. Some SMA babies are "floppy," which means they don't learn to roll or sit at the predicted age. An older child can fall more often than younger children or have difficulty lifting objects.

Scoliosis (a bent spine) can occur in children with SMA if the back muscles are weak. A child with extreme SMA may be unable to stand or walk, and may need assistance to feed and breathe.

What Are the Different Kinds of SMA?

SMA is divided into four categories based on the severity of the condition and the age at which signs first appear:

Form I, also known as Werdnig-Hoffmann disease or infantile onset SMA. Type I affects children from birth to 6 months of age, with the majority of babies displaying symptoms by 3 months. SMA in this type is the most serious.

Kind II affects infants between the ages of seven and eighteen months. Children can sit on their own but not walk.

This form will range from mild to serious.

Type III, also known as Kugelberg-Welander syndrome or juvenile SMA, affects children from the age of 18 months to puberty. Children can walk freely, but their arms and legs are frail, and they are vulnerable to dropping. In girls, this is the mildest type of SMA.

The adult form of SMA is known as Type IV. Symptoms typically develop after the age of 35 and progressively intensify over time. Since type IV SMA progresses slowly, many people don't realize they have it until years after symptoms appear.

STEM CELL CARE INDIA

As a stem cell company at the cutting edge of Regenerative Medicine, SCCI is dedicated to developing technologies and protocols for safe and effective treatments utilising adult stem cells derived from the umbilical cord.

StemCellCareIndia offers a comprehensive range of stem cell solutions in India for the treatment of different kinds of diseases. Our main focus is helping people get back to good health through stem cell treatment. We have association with the leading hospitals, research institutions and medical colleges specialising in regenerative medicine to offer cost – effective healthcare.

Around the world, emerging technologies and advancements in stem cell therapies are driving major changes in healthcare. With the use of potent mesenchymal stem cells isolated from the tissue of umbilical cord, damaged cells are replaced by new cells. This makes the symptoms of the diseases disappear. We are passionate about the latest developments in stem cell therapies and strive to deliver safe and effective treatment options to patients' world over at the highest medical standards.

As the leading stem cell therapy company, StemCellCareIndia takes care of each and every section of the Medical Trip to New Delhi. We ensure our patients get the best healthcare service by bringing in place, the renowned multispecialty hospitals, latest stem cell treatments, economical accommodations and travel options for the patients.

VISION

Our vision is to provide effective healthcare services to patients all over the world fast and hassle-free. For this, we work closely with some of the best medical centres and research institutions in providing stem cell therapeutic solutions to our patients. Our work is to redesign and deliver the best treatment possible for the safe and fast recovery of patients and make their journey towards 'good health' as stress-free as possible.

MISSION

Our mission is to provide the international patients visiting in New Delhi, the satisfaction of best treatment for any kind of disease. The face of healthcare has changed over the years and so, have the healthcare costs. We have a professional team that takes care of every need of international patients, from appointment to accommodation. Through our network of internationally accredited hospitals and research clinics, we provide reliable and bespoke assistance. Seeing patients getting healthier and happier is what make us happy.

NEURO DISORDER

Contrary to what some may think, Neurological Stem Cell Therapy isn't a sole treatment for a single kind of disease. Nor are neurological syndromes restricted only to the brain. A neurological disease is a disorder or complaint that affects any portion of the body's nervous system. These can consist of the elementary physical structure, biochemistry or electrical functioning of the brain, the spinal cord, or any nerves connected to them. The symptoms can run the gamut including paralysis, muscular complications, trouble with coordination, losing physical sensations, experiencing seizures, confusion, pain, or shifts in one's sense of cognizance. Each region of the brain and spinal cord has its own specialty cells. The neurological stem cell therapy treatments at Stem Cell Care India concentrates on isolating and intensifying the patient's own adult Neural Stem Cells from each area that is to be involved in treatment. This is done by reaping a sample of the patient's own fatty tissue that is found just underneath the skin. With this progressive technique, NSI can relieve the symptoms of a varied variety of neurological ailments, such as Autism and Multiple Sclerosis.



How Neurological Stem Cell Therapy Works

All adult stem cells have the aptitude to be transformed into whatever kind of cell the body needs. But those that are stowed in the fat that forms around our upper legs, stomach area and buttocks are particularly potent. Moreover, these highly regenerative adult stem cells are found in particular profusion in our fat, making harvesting not only easier but the sample size much smaller than harvesting from other zones like bone marrow. Neurological stem cell therapy "assigns" new adult stem cells the tasks of becoming the exact varieties of cells required for the re-growth and regeneration of missing, malfunctioning or incapacitated tissue, bone, blood elements or neural cells. Once processed and re-vaccinated into the patient, the newly assigned adult stem cells always remain the particular type they have become. In the case of neurological ailments, the two chief objectives of neurological stem cell therapy is 1.) to help in the regeneration and repair of neural circuitry and 2.) excrete protective factors that protect cells already working at a healthy level. Another imperative objective of neurological stem cell therapy is to deter or, if and whenever possible, altogether stop the weakening of cellular matter that neurological ailments or injuries might cause.

SUPPORTIVE THERAPIES

Stem Cell Care India is unlike any other stem cell treatment provider in the world, the reason? Since its inception, we have been developing and enhancing our stem cell treatment protocols with the notion that stimulation via a number of supportive therapies is essential to augment stem cell regenerative response. Our treatment methodology permits our patient to maximize their improvements. Learn more about the diverse therapies provided in our treatment practices.

ACUPUNCTURE

Acupuncture is a method in which practitioners stimulate particular points on the body – most often by inserting thin needles via the skin. It is one of the most effective practices used in old-style Chinese medicine. Acupuncture arouses nerve fibers to convey signals to the spinal cord and brain, stimulating the body's central nervous system. The spinal cord and brain then release hormones accountable for making us feel less pain while improving overall health. Acupuncture might also: upsurge blood circulation and body temperature, affect white blood cell activity (responsible for our immune function), decrease cholesterol and triglyceride levels and normalize blood sugar levels.

EPIDURAL STIMULATION

Epidural stimulation has aided preceding patients to recoup some voluntary motor function. The technology comprises of a device implanted in the epidural space which constantly delivers electric signals to the spinal cord. These electric signals mimic the ones that are delivered by the brain to voluntarily control the body's movements. The epidural stimulation device is offered by Medtronic.

AQUA THERAPY

Aquatic Physical Therapy is the practice of physical therapy in a specially designed water pool with a therapist. The exceptional properties of the aquatic environment augment interventions for patients with neurological or musculoskeletal conditions. Aquatic therapy embraces a widespread variety of techniques permitting patients to improve their balance, muscle strength and body mechanics. Aquatic therapy works to boost the rehabilitation process and support efficiency of stem cell treatment.

HYPERBARIC OXYGEN THERAPY

Hyperbaric Oxygen Therapy (HBOT) is the medical use of oxygen at a level upper than atmospheric pressure. The equipment necessary comprises of pressure chamber, which might be of rigid or flexible construction, and a means of supplying 100% oxygen into the respiratory system. Published research shows that HBOT upsurges the lifetime of stem cells after inoculation and offers an oxygen-rich atmosphere for the body to function at optimal levels.

NERVE GROWTH FACTOR (NGF)

Nerve growth factor (NGF) is a member of the neurotrophic factor (neurotrophin, NTFS) family, which can inhibit the death of nerve cells and has several features of typical neurotransmitter molecules. NGF plays an imperative role in the development and growth of nerve cells. NGF is synthesized and secreted by tissues (corneal epithelial, endothelial, and corneal stromal cells), and it can be up-taken by sympathetic or sensory nerve endings and then conveyed to be stored in neuronal cell bodies where it can encourage the growth and differentiation of nerve cells. NGF can exert neurotrophic effects on injured nerves and promote neurogenesis (the procedure of generating neurons from stem cells) that is closely related to the development and functional maintenance and darning of the central nervous system. It is also adept of encouraging the regeneration of injured neurons in the peripheral nervous system, improving the pathology of neurons and guarding the nerves against hypoxia (lack of oxygen)/ischemia (lack of blood supply).

TRANSCRANIAL MAGNETIC STIMULATION

Research has shown that TMS can efficiently treat symptoms of depression, anxiety, neurological discomfort, stroke, spinal cord injuries, autism and more. This process is very simple and noninvasive. During the process, a magnetic field generator or "coil" is placed near the head of the individual getting the treatment. The coil produces small electrical currents in the area of the brain just beneath the coil via electromagnetic induction. This electrical field causes a change in the trans membrane current of the neuron which results in depolarization or hyper polarization of the neuron and the firing of an action potential.

OCCUPATIONAL THERAPY

Occupational therapy interventions concentrate on adapting the environment, revising the task and teaching the skill, so as to upsurge participation in and performance of everyday activities, predominantly those that are meaningful to the patient with physical, mental, or cognitive maladies. Our occupational therapists also focus much of their work on detecting and eradicating environmental barriers to independence and participation in day-to-day activities, akin to everyday life.

PHYSIOTHERAPY

Physical therapy or physiotherapy (often truncated to PT) is a physical medicine and rehabilitation specialty that, by using mechanical force and actions, remediates damages and promotes flexibility, function and quality of life via examination, diagnosis, prognosis and physical intervention. We combine our PT with stem cells for supreme physical rehabilitation improvements.

NUTRITION THERAPY

Medical nutrition therapy (MNT) is a therapeutic methodology to treat medical conditions and their related symptoms by the usage of a specifically tailored diet formulated and monitored by a specialist. The therapy targets at fixing nutritional inefficiencies and physiological imbalances so as to provide the best environment possible for the stem cells to develop appropriately as well as improving patient's general health.



PATIENT GALLERY



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