Autism

What is Autism?

It is a neuro-biological disorders which is characterized of impairment of social interaction, language and communication skills with repetitive behavior. Because of such a range of symptoms **autism** is also called as Autism Spectrum Disorder(ASD).

What Causes Autism?

The causes of autism are still poorly understood, but research points to two key factors:

1. Reduced oxygen levels in specific parts of the brain
2. Chronic inflammation in the gut, caused by the immune system malfunction
3. Other potential causes may include Fragile X syndrome, brain tumors, brain swelling, missing metabolic enzymes, and measles in the mother during pregnancy.

Diagnosis

Diagnosing autism spectrum disorder (ASD) can be difficult, since there is no medical test, like a blood test, to diagnose the disorders. Doctors look at the child's behavior and development to make a diagnosis. ASD can sometimes be detected at 18 months or younger. By age 2, a diagnosis by an experienced professional can be considered very reliable. However, many children do not receive a final diagnosis until much older.

In some cases, the primary care doctor might choose to refer the child and family to a specialist for further assessment and diagnosis. Specialists who can do this type of evaluation include:

- Developmental Pediatricians (doctors who have special training in child development and children with special needs)
- Child Neurologists (doctors who work on the brain, spine, and nerves)
- Child Psychologists or Psychiatrists (doctors who know about the human mind).

Current available treatments

The current therapy to alleviate the symptoms is to reverse these abnormalities through use of antibiotics, anti-inflammatory agents and hyperbaric oxygenation. But none of these addresses the root cause of the disorder i.e**. oxygen deprivation and intestinal inflammation.** Risperidone (Risperdal) is the only drug approved by the FDA for children with **autism** spectrum disorder.

Scientific rationale behind using mesenchymal stem cells to treat autism:

The rationale behind treating autism with mesenchymal stem cells is that autism is significantly correlated with inflammatory and neuro-inflammatory cytokines including macrophage-derived chemokine (MDC) and thymus and activation-regulated chemokine (TARC). Intravenous administration MSCs has been shown in multiple clinical trials to decrease inflammation. Thus, decreasing inflammation in the autistic patient alleviates symptoms of autism. We have seen significant improvement in such patients after the administration of mesenchymal stem cells.

Stem Cell Therapy in Autism – Journal of Translational Medicine.

Pioneering Research

Stem Cell Therapy

Whatever the case, stem cells appear to be a promising treatment for autism. For instance, they can replace malfunctioning gut cells with healthy ones, and since stem cells can replicate indefinitely, the problem would be unlikely to recur. The same may prove true for brain cells, enzyme and hormone production systems, and more. Additionally, mesenchymal stem cell can reduce inflammation, and therefore, possibly, autism.

Stem Cell Therapy at Stem Cell Medicare

Stem cell therapy with autologous mesenchymal stem cells from patients own bone marrow have shown very promising results for autism. The bone marrow derived mesenchymal cells are collected from the hip bone (Iliac Crest). The mesenchymal cells are separated in the laboratory by centrifugation. The stem cells are administered by intrathecal injection and intravenous route. The remaining bone marrow is sent to a Specialized laboratory for amplification of stem cells and converting them into progenitor cells for subsequent intravenous administration.

Eligibility Criteria:

- Clinically diagnosed with an ASD for which no caused has been detected.
- Anticonvulsants used for the treatment of seizer disorder will be permitted if the dosage has been stable for three months, and the subject is seizure free for at least 1 to 2 months.

The Success Rate: Over all the success rate is 90% if coupled with physiotherapy.Clinical evaluation of Autism patient is on the done the basis of improvement in following parameters;

- 60% patients showed improvement in speech.
- 57% patients showed improvement in communucati0on skills.
- 49% patients showed improvement in physical health.
- 65% patients showed improvement in behavior.
- 47% patients showed improvement in cognitive awareness.
- 57% patients showed improvement in Language.

About 96% if coupled with other physiotherapies. A special room is required for training and physiotherapy.