Motor sensory stimulation (Modulation) in Parkinsonism

Parkinsonism is a neurodegenerative disorder characterized by a progressive loss of midbrain dopaminergic (DA) system. Subsequent reduction in striatal dopamine results in various clinical manifestations with Tremor, Rigidity, Bradikinesia and Postural defect. The term Motor Sensory stimulation (Modulation) encompasses a broad range of treatments, both electrical and chemical, targeting various locations in the Brain and the body to achieve the desired results. Deep brain stimulation (DBS) is a Neurosurgical treatment used in Parkinsonism and other conditions. Electrical stimulation at high frequency in precise locations of the brain results in the restoration of the balance of the circuits that are disrupted in Parkinsonism (Parkinson Disease). Stimulation in high frequency of the sub thalamic nucleus has now become a standard Neuro Surgical therapy in Parkinson disease. Transplantation of fetal dopaminergic (DA) neurons also produces symptomatic relief. The technical and ethical difficulties in obtaining sufficient and appropriate donor fetal brain tissue are the limitations in the application of this therapy. Neural precursor cells and embryonic stem (ES) cells are going to be the potential donor cells for transplantation. In the mid-1990s, creation of targeted holes in specific areas of the brain or Lesioning were the main approaches. Repalement Cell therapy was tried in some cases. Transcranial Magnetic Stimulation (TMS) is a non-invasive way of stimulating the brain, have also shown benefit in Posture and gait in some patients of Parkinson Disease. This targeted Stereotactic thalamotomy of the thalamic nucleus ventralis intermedius (VIM) is routinely used for bilateral extrapyramidal movement disorders. This targeted neuromodulator therapies can avoid the side effects. They are easily reversible if and when occurs, they can give an important degree of therapeutic effect in patients. This communication addresses the mainly Deep Brain Stimulation, Transplantaion and Stem Cell therapy and its Frontiers of the Neurophysiological basis, technical, ethical considerations and its Therapeutic effects in Parkinsonism, Tremor and Dystonia patients.

Biography

Srinivas Avathvadi Venkatesan is the President of Indian Academy of Neurology and also he is the emeritus Professor of The Tamilnadu DR.M.G.R.Medical University. Srinivas Avathvadi Venkatesan, driven by his quest for excellence and the latest discoveries on human brain related disorders, joined Madras Medical College (MMC) and received MD(General Medicine) in 1978. Later he pursued and received DM in Neurology from his alma mater. He is First Neuro physician of his state Tamil Nadu in India in government service to be conferred, the Fellow of the Royal College of Physicians (FRCP) in London in 2012, fellowship of the Indian Academy of Neurology 2004 and fellowship by the American Academy of Neurology, in 2003. He is the First Indian to receive American Indian Neurology Award (AINA) in USA in 2001, for the best paper presentation IN STROKE during annual American Academy of Neurology meeting in 2001 in PHILADELPHIA. ByThe Tamil Nadu Dr. MGR Medical University. Currently serving as a Member –in the ACADEMIC COUNCIL of National institute of Mental health and Neurosciences, Deemed University, Bangalore.

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