

8TH WORLD PHYSIOTHERAPISTS AND PHYSICIANS SUMMIT

August 15-16, 2018 Tokyo, Japan

**Specialized neuro-rehabilitation strategies for retraining brain circuits following functional neurosurgery:
An occupational therapy perspective****V Siddharth**
NewRo, India

Objective: The purpose is to highlight and briefly summarize how a patient who has dystonia involving either complete body, focal or task specific were managed through occupational therapy after they were operated for functional neurosurgeries. This report also aims at providing a backbone structure for rehabilitation which maximized results post-surgery in such cases.

Methodology: Four different cases, one each of cervical dystonia (retrocollis) progressed to generalized body dystonia, cervical dystonia, writer dystonia and guitarist dystonia who underwent stereotactic MRI guided RF ablation surgeries were referred for neuro-rehabilitation on the first day post operation. Each one of them was assessed pre- and post- surgically to identify the deficits in the performance components and associated performance areas. Thorough occupational therapy evaluation was done. Following evaluation, occupational therapy sessions were planned with goals specific to improving performance in day to day task and specific task identified as per Canadian Occupational Performance Measure. Occupational therapy (part of neuro-rehabilitation) was done to improve range of motion. Therapy strategies used included graded strengthening of the weak muscles, motor re-education to rectify muscle memory of the dystonic muscles, postural correction using visual, tactile and proprioceptive feedback, cognitive retraining to focus on the position of the involved body part while active participation during therapy, visual fixation and scanning task for cervical dystonia and generalized dystonia, deep relaxation techniques and care giver education. For focal dystonia, task specific training using a combination of departmental activities and slow and graded retraining of the involved task were carried out.

Result: After completion of occupational therapy session patients reported remarkable improvement in their abilities. They learnt to hold head in erect posture with minimal involuntary contraction, sit independently and perform their self-care task under supervision. Those who had focal/task specific dystonia, they regained 85-90% functionality as per their satisfaction rating. People with focal/task specific dystonia regained independent in all basic activities of daily living and instrumental activities of daily living participation and were able to return to their social life confidently. Patients with generalized dystonia became community ambulatory with one person's assistance. All of them reported return of dystonia component if therapy was not continued as advised or over did beyond the advised repetitions or duration. But they regained their abilities within 1 week with intense occupational therapy. Hence, they were strictly advised to follow up every 15 days to review the therapy program.

Conclusion: Patients with severe dystonia can be successfully rehabilitated for optimal results using combination of neurosurgery and neuro-rehabilitation comprising of occupational therapy as a significant contributor. The results vary depending on the severity of dystonia, type of dystonia, post-op status, proper implementation of neuro-rehabilitation and patient support.

siddharthnewro19@gmail.com