



**Service Priorities and Programmes
Electronic Presentations**

Convention ID: 325

Submitting author: Dr Polly LAU

Post title: Other(Please specify):, Queen Elizabeth Hospital, KCC

Revisit of outcome and course of recovery of patients with neurological disorders: experience drawn from the rehabilitation for a teen victim with severe traumatic brain injury in Manila Hostage Crisis

*Lau PMY, Chao CYL, Chau DKW, Luk HKY, Mak GHF
Physiotherapy Department, Queen Elizabeth Hospital*

Keywords:

Physiotherapy
Rehabilitation
Neurological
Recovery period
Plasticity

Introduction

There is a general belief that the recovery time period required after brain injury are within 6 months to one year; and that only limited neurological recovery could happen after this golden period. Given the opportunity to provide a targeted, comprehensive physiotherapy neurorehabilitation program to a teen victim who suffered from severe traumatic brain injury (TBI) in Manila Hostage Crisis, it was found that continuing significant improvement in physical and functional outcomes did happen after 3 years post-injury. Therefore, there is a need to revisit the concept on rational planning of rehabilitation process for patients with neurological disorders.

Objectives

To review the physical rehabilitation process three years post-injury and outcomes of a survivor with severe TBI in Manila Hostage Crisis.

Methodology

The patient is now a 22-year-old teen who presented with severe physical impairment that has involved the trunk and four limbs after suffering a serious traumatic bullet wound injury/ blunt force trauma to his head happened in August 2010. He has impairments in higher executive functions, limbs control, functional mobility, balance and gait, all of which has severely limited his functional performance in daily living. An intensive physiotherapy neurorehabilitation program was provided 3 hours a day, 5 days per week for 28 months after one-year post-injury. Interventions included hydrotherapy, manual therapy, limbs facilitation exercises, neuromuscular electrical stimulation, virtual reality training; and mobility tasks training such as balance, transfers, robot-assisted gait training, and overground gait re-education.

Result

Over the course of more than 2 years of rehabilitation till date, the patient continues to show significant improvement in trunk and limbs control, sitting balance, functional

mobility such as turning, self-transferring, and ambulation as evidenced by video recording on functional performance and regular charting on muscle strength, sitting balance, ambulatory performance, and modified Barthel Index Score. The Program resulted in many profound benefits for both the patient and his caregivers, including physical and psychosocial aspects. The recovery journey for patients with severe neurological disorder is a long, slow, difficult and painful process. With the active participation of the patient in the rehabilitation process and the strong support from his family members and caregivers, this teen victim demonstrated that brain plasticity may continue to occur in patient with chronic brain injuries when adequate therapeutic dosage and appropriate interventions were given. Therefore, the importance of active, intensive physical rehabilitation must be highlighted to restore and maximize their functional gains even for those chronic sufferers.