Service Priorities and Programmes

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A Pilot Physiotherapy Program with Glossopharyngeal Breathing and Assist Cough Technique for Children with Duchenne Muscular Dystrophy (DMD)

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Introduction

Children with Duchenne Muscular Dystrophy (DMD) have to face progressive deterioration in their physical conditions and finally will affect the respiratory functions. Physiotherapy intervention monitoring the disease progression as well as equipping them with special lung recruitment technique such as Glossopharyngeal Breathing (GPB) and assist cough technique may help to alleviate their symptoms. A new respiratory program for children with DMD has been introduced since July 2013.

Objectives

The aim of this program is to investigate the profile of patients in terms of respiratory status; the ability in acquiring the aforementioned techniques from both the patients and carers.

Methodology

Children with DMD were recruited from July 2013 to Jan 2014. Demographic characteristics, respiratory parameters [FVC and PCR], the number of sessions for patients to acquire the GPB technique, and the carer's knowledge in manual cough assist technique, the confidence and satisfaction level of patient as measured from a rating of 0-10 were collected.

Result

Five patients were recruited, with 4 boys and 1 girl (mean age of 14 +/- 4 years old). All the patients and their carers have not learned GPB and proper assist cough techniques before. Patients took at a mean 1.6 +/- 1.4 session to acquire the GPB technique while carers could learn the manual cough assist technique within a session. The mean percentage of predicted FVC was 68 +/- 17%. The mean PCR was 228 +/- 28 liters/minute. The mean confidence level of patients to perform GPB was 9.6 +/- 0.9 while that of patient's carer to do cough assist technique was 9.3 +/- 1.5 after the learning sessions. The mean patients' and their carers' satisfaction level for the helpfulness of the taught GPB and cough assist techniques to patients' chest

condition was of 9.2 +/- 1.1 and 8.3 +/- 1.3 respectively. No adverse event was noted during the intervention period.