



Service Priorities and Programmes
Electronic Presentations

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Submitting author: Ms Alice CHIU

Post title: Senior Physiotherapist, The Duchess of Kent Children Hospital, HKWC

**Effectiveness of an Enhanced Physiotherapy Breathing Technique:
Glossopharyngeal Breathing (GPB) for Young Patients with Neuromuscular
Disease**

HUI CKC (1), CHOI WCS (1), Li YSS (1) CHIU YYA (1) TSANG CCR (1)

(1) Physiotherapy Department, The Duchess of Kent Children's Hospital at Sandy Bay

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Introduction

Introduction Respiratory complication is commonly encountered by young patients with Neuromuscular Disease. Pulmonary rehabilitation is essential to maintain their respiratory condition despite the natural disease progression. Glossopharyngeal Breathing (GPB) is one of the special breathing techniques adopted for this client group to facilitate their coughing and breathing tolerance for functional activities.

Objectives

Objectives: A review of whether Glossopharyngeal Breathing (GPB) can help to improve the lung function performance for young patients with Neuromuscular Disease at different stages of their disease progression.

Methodology

Methodology: In year 2013, lung function performance of 11 male patients with Neuromuscular Disease were reviewed retrospectively for 10 years from their age 15 to 25 with their disease progressing from ambulatory stage to wheelchair stage and required non invasive ventilatory support nocturnally. Their Forced Vital Capacity (FVC) performed with normal breathing technique in sitting and Forced Vital Capacity (FVC) performed with Glossopharyngeal Breathing (GPB) were reviewed at 15, 20 and 25 years of age. Result

Result

At age 15, average FVC with normal breathing technique in sitting was 974.4cc and average FVC with GPB was 1067.8cc. Percentage increase was 9.6% and statistically significant ($p < 0.01$). At age 20, average FVC with normal breathing technique in sitting was 787.8cc and average FVC with GPB was 845cc. Percentage increase was 7.3% and statistically significant ($p < 0.01$). At age 25, average FVC with normal breathing technique in sitting was 639.3cc and average FVC with GPB was 684.7cc. Percentage increase was 7.1% and statistically significant ($p < 0.01$). Social

functions, verbal communications and coughing was maintained using Glossopharyngeal Breathing at all stages of disease progression. Glossopharyngeal Breathing was useful to improve their breathing effort at different age and mobility levels. It is effective to maintain their social verbal communication ability and breathing function at all stages of their disease progression.