

A Study on Ventilatory pattern, Parameters and Intervention for the clients with Spastic Quadriplegic Cerebral Palsy

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INTRODUCTION:

Patients with spastic quadriplegic cerebral palsy have immense changes in ventilatory pattern due to increased spasticity of the muscle, they rely mostly on abdominal muscle instead of chest muscle. Limited use of muscles of the chest further result in reduced thoracic expansion resulting in decrease in lung expansion. Hence, there arises a need to study the ventilatory parameters to find out whether there is a respiratory compromise and to design a pulmonary rehabilitation program.

AIM:

To study the ventilatory pattern, parameters of clients with spastic quadriplegic cerebral palsy and to design an interventional protocol for the same.

METHODOLOGY:

This study was designed to be conducted in phased manner,

1. Identifying suitable clients meeting the inclusion criteria.
2. Assessing the ventilatory parameters using computerized spirometer.
3. Comparing the values of respiratory parameters with normal subjects.
4. To find out the area of short fall and device appropriate pulmonary rehabilitation protocol.

PROCEDURE:

30 clients with spastic quadriplegic cerebral palsy who met the inclusion criteria were divided as control group and experimental group with 15 members in each group. Control group is given NDT program for 45minutes, pulmonary rehabilitation program along with NDT is given to experimental group for 45minutes, 5days in a weeks for 6 weeks.

The pulmonary training includes,

1. Breathing Exercises
2. Diaphragmatic strengthening exercises
3. Thoracic expansion exercises
4. Active exercise to shoulder/shoulder girdle etc.,

RESULT:

The study indicates that the pulmonary values have improved for the clients with spastic quadriplegic cerebral palsy by providing pulmonary rehabilitation compared with control group.

OUTCOMES:

1. Pulmonary rehabilitation is provided as part of therapeutic service.
2. This study is presented in International Conference (SAARC) as a research study to the scientific community.

FUNDING: By NIEPMD

Duration : 3years

Budget : 5Lakhs

CURRENT STATUS:

Completed



Experimental Group



Experimental Group



Control Group