

平成 22 年度 博士後期課程学位論文要旨

学位論文題名 (注: 学位論文題名が欧文の場合は和訳をつけること)

Ventilatory effects of Manual Breathing Assist Technique (MBAT) and Shaking in central nervous system disease sufferers

(重症心身障害者における徒手的呼吸介助手技およびシェイキングが換気に及ぼす影響)

学位の種類: 博士 (理学療法学)

人間健康科学研究科 博士後期課程 人間健康科学専攻 理学療法科学系

学修番号 07995603

氏名: 栗田英明

(指導教員名: 新田 収 教授)

注: 1,000 字程度 (欧文の場合 300 ワード程度) で、本様式 1 枚 (A4 版) に収めること

Abstract

Objective: Comparative evaluation of the effects of Manual Breathing Assist Technique (MBAT) and Shaking on the respiratory ventilation of central nervous system diseases sufferers and healthy individuals.

Design: Experimental Study.

Setting: Medical facilities.

Population: A group of thirteen healthy individuals (normal group) and a group of twenty-one central nervous system diseases sufferers without upper airway obstruction (subject group).

Intervention: Administration of MBAT and shaking by a single physiotherapist.

Outcome measures: Evaluation of Tidal Volume, Peak Expiratory Flow Rate and Expiratory Time under rest respiration, MBAT, and shaking conditions.

Results: As a result of a two-way factorial analysis of variance, TV and Te showed significant interaction effect between the subject group and the normal group, while PEFr showed no significant interaction. TV of the normal group was increased about 65% by MBAT and about 110% by shaking, compared to that under the rest respiration. While TV of the subject group was increased about 10% by MBAT, no increase was observed under the condition of shaking. As to Te the normal group was affected by the intervention. However, no difference was observed for the subject group under rest respiration, MBAT, and shaking conditions.

Conclusion: As far as TV and Te are concerned, significant differences were observed between the subject group and normal group in terms of the effects of MBAT as well as shaking. While MBAT increases TV of the subject group, shaking does not affect TV of the same subjects. Both MBAT and shaking are effective methods for increasing PEFr.