

Respiratory Care Rehab Conference- Abstract (unofficial translation of original document)

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Purpose

To study the effect of Thixotropy conditioning and pneumatic machine exercise (Thixo-Ex) to the mobility of thorax, respiratory function, and exercise capacity of COPD patients.

Objects

Stable COPD patients: 12 patients (Male only, average age 74.2 ± 4.4 , %FEV1.0 $48.4 \pm 11.9\%$)

Method

Perform the inspiratory muscle exercise using HUR (Thixo-Ex) and Threshold IMT.
Before and after exercise, the following issues are evaluated and analyzed.

- Chest expansion
- Respiratory function
- Distance of 6 minutes walk
- Breathing difficulties while walking

For Thixo-Ex (HUR), the resistance was 10% of maximum muscle strength, 5 repetitions x 3 sets.
The same resistance and repetitions were applied to IMT EX.

Result

For Thixo-Ex, the result of ensiform chest expansion variability (Before and after the exercise) and breathing difficulties while walking were positively correlated with %FRC.
The effect of Thixo-Ex differed depending on the pulmonary hyperinflation.

Consideration

When we focus only on Thixo-Ex, the breathing difficulty while walking and %FRC have positive correlation according to the test result. Therefore for COPD patients with less pulmonary hyperinflation, breathing difficulties can possibly be reduced by doing Thixo-Ex.