Comparison of the effect of Core exercises and Auxiliary Respiratory muscles exercises on the rate of Tiffeneau (FEV1 / FVC)

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Abstract

Objectives: The aim of this study is to investigate the effect of core exercises and auxiliary respiratory muscles exercises on the rate of Tiffeneau (FEV1 / FVC).

Materials - Methods: This study is a randomized controlled double-blind study. 45 healthy people were included in the study. Core Exercise Group 15 people average age 19.93 ± 0.79 years, body mass index (BMI): 20.58 ± 2.38 kg / m2, Auxiliary Respiratory Muscles Exercise Group 15 people average age 19.86 ± 0.63 year, BMI: 22.48 ± 2.63 kg / m2 and Control Group 15 mean age was 19.80 ± 0.86 years, BMI: 22.89 ± 3.27 kg / m2. In this study, exercise was applied twice a week for six weeks. FEV1 / FVC values of the participants were measured with Cosmed Fitmate Med device before and after the study. The difference between the average of the FEV1 / FVC results of the groups was analyzed by one-way ANOVA test. Ethics committee decision numbered 2020/024 was taken from KTO Karatay University Faculty of Medicine, Pharmaceuticals and Non-Medical Devices Research Ethics Committee.
Results: At the end of the six-week study, when compared with the control group, a statistically significant difference was found in favor of the auxiliary respiratory muscles exercise group in the difference between the FEV1 / FVC results ($p < 0.01$). When the core group and the control group were compared, a statistically significant difference was found in favor of the Core group in the difference between the average of FEV1 / FVC results. ($P < 0.01$). No statistically significant difference was found between core exercise group and auxiliary respiratory muscles exercise group ($p > 0.05$).
Conclusions: These results showed that auxiliary respiratory muscles exercises and core exercises were effective on FEV1 / FVC value compared to the control group. It was thought that auxiliary breathing muscles exercises and Core exercises should be included in exercise programs to increase FEV1 / FVC value.
Key Words: Core, Auxiliary Respiratory Muscles, Exercise, FEV1 / FVC