**Title: Six Minute Walk Test in Covid 19**

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**Abstract:**

**Objective**: COVID-19 is a respiratory disease caused by a novel coronavirus, which usually presents with lung involvement respiratory symptoms such as cough and dyspnea. In the current study, we evaluated the pulmonary function and side effects of COVID-19 patients who had lung involvement after improvement, utilizing a 6-minute walking test (6MWT).

**Method**: In this single-center cross-sectional study, we recruited 60 COVID-19 (Confirmed by real-time reverse transcriptase-polymerase chain reaction (RT-PCR)), patients who were cured three months ago and collected their demographic information, modified medical research council (mMRC), Pulmonary involvement percentage (based on CT-scan reports), 6MWT, heart rate, gender, height, weight, body mass index (BMI) , and saturation of O2 (SPO2) before and after 6MWT. The study used frequency tests to describe qualitative variables and mean and standard deviation (SD) for quantitative variables. Data analysis included t-tests, chi-squares, and ANOVA. (SPSS 26 is used for all analytic processes).

**Result**: The mean age was 44.27±11.05 years (range 23-61); 32 men (53.3%) and 28 women (46.7%). The mean 6MWT was obtained at 454.97±95.32 meters with a minimum of 219 meters and a maximum of 620 meters. The average pulmonary involvement was 6.58±2.60, between 3 to 13 (out of 24). Age and functional dyspnea showed a significant reverse association with 6MWT, although SPO2 before and after 6MWT showed a straight association (p-value< 0.05). There was no significant association between 6MWT and BMI, heart rate, gender, or percentage of pulmonary involvement (p-value > 0.05).

**Conclusion**: The adverse pulmonary effect of COVID-19 will fade gradually over time. Age, functional dyspnea, and SPO2 play a remarkable role in pulmonary assessment through the 6MWT.

Keywords: COVID-19; Pulmonary involvement; 6 minutes walking test