

Abstract

Background

Wearing a surgical mask in hospitalized patients has become recommended during care, including rehabilitation, to mitigate coronavirus disease 2019 (COVID-19) transmission. However, the mask may increase dyspnoea and raise concerns in promoting rehabilitation activities in post-acute COVID-19 patients.

Objective

To evaluate the impact of the surgical mask on dyspnoea, exercise performance and cardiorespiratory response during a 1-min sit-to-stand test in hospitalized COVID-19 patients close to discharge.

Methods

COVID-19 patients whose hospital discharge has been planned the following day performed in randomized order two sit-to-stand tests with or without a surgical mask. Outcome measures were recorded before, at the end, and after two minutes of recovery of each test. Dyspnoea (modified Borg scale), cardiorespiratory parameters and sit-to-stand repetitions were measured.

Results

Twenty-eight patients aged 52 ± 10 years were recruited. Compared to unmasked condition, dyspnoea was significantly higher with the mask before and at the end of the sit-to-stand test (mean difference[95%CI]: 1.0 [0.6, 1.4] and 1.7 [0.8, 2.6], respectively). The difference was not significant after the recovery period. The mask had no impact on cardiorespiratory parameters nor the number of sit-to-stand repetitions.

Conclusion

In post-acute COVID-19 patients near hospital discharge, the surgical mask increased dyspnoea at rest and during a submaximal exercise test but had no impact on cardiorespiratory response or exercise performance. Patients recovering from COVID-19 should be reassured that wearing a surgical facemask during physical or rehabilitation activities is safe. These data may also mitigate fears to refer these patients in rehabilitation centres where mask-wearing has become mandatory.