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Acute effects of self-prone in hypoxemic patients with COVID-19: a prospective cohort

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Introduction: Patients with COVID-19 present deterioration of oxygenation, which may, from the respiratory point of view, develop hypoxemia and tachydyspnea. The evolution of the severity of symptoms should be treated with the administration of oxygen therapy. Recently, a therapeutic strategy called self-prone has been used with good response in oxygenation rates in patients with moderate symptoms who need hospitalization. Self-prone consists of using the prone position to improve the ventilation-perfusion ratio (V / Q). Although its results are promising, there are still few published studies. Objective: To evaluate the acute effects of self-prone on oxygenation in patients hospitalized with COVID-19. Method: A prospective cohort study will be conducted with 30 hypoxemic patients with COVID-19, admitted to the ward, spontaneously ventilating, with moderate symptoms, peripheral oxygen saturation (SpO2) less than 95%, dependent on supplemental oxygen. Obese patients with indication for invasive or non-invasive mechanical ventilation will be excluded. Patients will be submitted to the prone position for 30 minutes, maintaining supplemental oxygen. SpO2, heart rate, relationship between SpO2 and inspired oxygen fraction (FiO2) and respiratory rate will be evaluated in five moments: before, during 15 and 30 minutes of self-prone and after 5 and 15 minutes of returning to the supine position. Expected results: According to the methodology employed, it is expected that the self-prone promotes improvement of oxygenation, through the increase of SpO2, and reduction in respiratory and heart rate. In addition, patients can improve outcomes for the need for ICU admission or invasive mechanical ventilation.

Keywords: COVID-19. Self prone. Physical therapy.

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