

Effects of photobiomodulation on the prevention of the skin pressure injury in patients with a diagnosis of COVID-19: a randomized, controlled, and double blind clinical study protocol.

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Abstract

Introduction: The high incidence of pressure injuries (PI) is considered a serious public health problem and a negative indicator of the quality of nursing care. **Objective:** This study aims to verify the

preventive effects of the use of photobiomodulation (FBM) in areas more susceptible to the development of PI in patients hospitalized with COVID-19. **Methods:** This is a controlled, randomized, and blind clinical study including hospitalized participants with a risk of developing PI according to the Braden scale. Participants will be randomized into 2 groups: Group 1 - Control (n=70) in which the hospital's standard operating procedures for the prevention of PI will be performed; and Group 2 - FBM (n=70) the same procedures as the group control and also FBM will be performed once a day, for 10 minutes in each of the 3 regions most commonly affected by PI, that is, sacral and calcaneal (bilaterally). The FBM will be performed using a plate with 132 LEDs of 660nm and 132 LEDs of 850nm (each LED has P=8 mW; E=4.89J, radiant exposure= 9.6 J/cm²; irradiance 16 mW /cm², 10 min). The incidence of PI will be evaluated every 48 hours after hospital admission for a period of 1 month or until hospital discharge if it occurs before this period. The time of onset of PI will also be evaluated, and the possible correlations of anthropometric data measurements and incidence of PI. The data will be statistically evaluated.



BIOGRAPHY

Graduated in Nursing and Obstetrics from de University of Taubaté (1981). Specialist in Hospital Administration at São Camilo, in Occupational Nursing by FUNDACENTRO, and Intensive Care at the University of Taubaté. I worked as a lecturer in a nursing technician course at Robert Wood Johnson Foundation School, in the chemical industry (Monsanto) as a Labor Nurse, as a public servant in primary care. I implemented one of the first AMEs of the State of São Paulo, in the municipality of São José dos Campos.

Worked in public and private hospitals as coordinator of Adult, Pediatric, and Neonatal ICU for 14 years. My greatest experience is in the area of hospital management. At the moment, I work as Director of Nursing in a public hospital, managed by SPDM (Paulista Association for the Development of Medicine), of university Nove de Julho and I am a master's student in the Graduate Program in Biophotonics Applied to Health Science of the University Nove de Julho (UNINOVE), São Paulo, SP, Brazil.

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