

PHOTOBIMODULATION IN POST COVID PRESSURE INJURY

A SERIES OF CASE REPORTS

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Introduction: One of the complications that most impact the length of stay and quality of life in post-COVID-19 patients are pressure injuries (PLs). LPs occur when skin, tissue or bone prominences suffer prolonged damage from understanding for long periods of time in relation to a surface. Although LP is considered a health-related adverse event, in most cases it becomes preventable; prevention is challenging in the face of the critical condition of the patient with COVID-19. Studies show that photobiomodulation (FBM) has been shown to be a promising resource in the treatment of these wounds.

Objective: This study aimed to evaluate the healing of LPs stages 2,3 and 4 after photobiomodulation with lasers and LEDs in patients hospitalized in the public health system in the state of São Paulo, Brazil.

Methods: This is a series of cases where patients were treated every 48h with laser in the following parameters used: 660nm P=100mW 50J/cm². The cleaning of the wound was performed with saline solution and hydrogel with alginate was used as a standardized primary coverage in the institution. The lesions were photographed and measured using the *Image J* software. At each procedure, the wounds were evaluated using the *Bates Jensen scale* (BWAT), an instrument that measures the evolution of the lesion. BWAT assessments were performed by random raters, as well as serum C-reactive protein (CRP) levels during the hospital stay of the respective patients.

Results: The lesions followed up during the patients' hospital stay showed a reduction in the BWAT scale in the scores related to diameter, amount of necrotic tissue and quality of the wound bed, with a significant improvement in the healing process during the proposed treatment (figure 1,2,3) The patients were discharged from the hospital after clinical improvement and satisfactory evolution of PLs and serum PCR levels.

Conclusion: FBM was satisfactory in the treatment of PL after COVID, than reducing the length of stay, hospital costs and providing an improvement in the quality of life of these patients; it will certainly be able to safely be part of future protocols in the treatment of this important adverse event



Figure 1a : 1º day BWAT = 49



Figure 1b 25º day BWAT=35



Figure 2a : 1º day BWAT= 47



Figure 2b : 32º day BWAT= 34



Figure 3a : 1º day BWAT= 37



Figure 3b: 22º day BWAT= 15



Figure 4a: 1º day BWAT= 38



Figure 4b: 6º day BWAT= 31