

Format

Presentation title: Use of Photobiomodulation Therapy in the treatment of radiotherapy associated dermatitis on a breast cancer patient: case report

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Abstract (250-300 words):

Photobiomodulation therapy (PBMT) appears as a low-cost technology, with results in tissue repair process associated with radiodermatitis (RD). Aim to describe how the use of PBMT act in RD treatment in woman with breast cancer undergoing radiotherapy (RT). It's a case report extract from randomized clinical trial study (UTN Number U1111-1279-1686). The patient received application of Laser Therapy EC, DMC, power of 100mW, continuous emission mode, red wavelength ($660\text{nm} \pm 20\text{nm}$), fluence of $10.2\text{J}/\text{cm}^2$ and energy of 1J per point. The application has occurred for five days, after manifestation of RD. For evaluation, the Radiation Therapy Oncology Group (RTOG) scale was used and thermal images of irradiated area were captured. Patiente, diagnosed with invasive ductal breast cancer in right breast, stage T2N0M0, with prior quadrantectomy and chemotherapy, had proposed RT in three-dimensional (3D) modality, with a hypofractionation regimen. Fifteen fractions (Fr) of radiation were prescribed for breast, supraclavicular fossa and axilla, with therapeutic dose of $4005\text{cGy} + 3\text{Fr}$ boost of 801cGy , with 267cGy applied daily, except weekends. At 8Fr, she presented RTOG grade 1, characterized by hyperchromia and hyperemia of axillary and inframammary line, with temperature variation (ΔT) of 0.4°C . At 12Fr, RTOG 1 with local burning were reported, with $\Delta T 1.5^\circ\text{C}$. At 16Fr, RTOG grade 3 characterized by moderate erythema and confluent moist desquamation, in axillary and inframammary area were observed, with burning pain and $\Delta T 1^\circ\text{C}$. RT was stopped and the area treated with FBMT applied daily. On 5th day of application, the skin was completely regenerated, with $\Delta T 0.8^\circ\text{C}$, allowing return to RT to complete the treatment. In the end, $\Delta T 0^\circ\text{C}$ and the skin remained regenerated, without complaints. Conclusion: FBMT accelerated tissue repair, allowing a faster return to radiotherapy and promoting pain relief from the first application, as well as reducing ΔT .

Biography (150-200 words):

Nurse graduated from the Federal University of Ceará (2010 to 2014), with integration to the Maternal and Mammary Health Research and Extension Project (2010-2017), with an emphasis on breast cancer care. Master in Nursing in Health Promotion from the Federal University of Ceará



(2017). Specialist in Stomatherapy from the State University of Rio de Janeiro (2019). Specialist in in Oncology by residency modality from National Cancer Institute (2020). She is currently a student of the Doctoral Course of the Postgraduate Program in Nursing in Adult Health at São Paulo University, Brazil (2020-current).