

Poster Session

greatest epithelial and connective tissue damages were observed in samples exposed to pw at 4 W (average values: 1.4 mm and 1.75 mm). The minor epithelial and connective tissue damages, on the other hand, were observed in samples exposed to cw at 2W (average values:1.07 and 1.39).

Conclusion: Based on the data, connective tissue damage is generally higher than epithelial damage. Laser wavelengths are selectively absorbed by melanin, haemoglobin, and water, causing more significant effects on the vascularized and hydrated connective tissue. Pulsed mode led to slightly more damage than continuous mode across all power levels. Further studies with more samples could provide clarity on this.

P-034

Marcelo Caliman Sato, Daniele Rodrigues, Luciane Hiramatsu Azevedo (Brazil)

Category: Case report

Title: THE USE OF BLUE LASER IN THE TREATMENT OF VENOUS LAKE

Aim: Removal of vascular lesions using blue laser, due to the greater effectiveness of this laser with hemoglobin.

Case description: A 54-year-old Black female patient presented with a complaint of a “small blood blister in the mouth” without pain and sought treatment at the Special Laser Laboratory in Dentistry of the School of Dentistry at the University of São Paulo (LELO-FOUSP). A soft, well-defined, blister-like lesion, measuring slightly less than 1 cm in diameter, purple in color, smooth, and non-pedunculated, was observed on the right outer region of the lower lip. Photocoagulation was performed using a perpendicular incidence of the laser beam in continuous mode with scanning, keeping the optical fiber tip 2 mm away from the lesion to allow for defocused irradiation. The procedure was carried out in an outpatient setting under local infiltrative anesthesia (2% lidocaine, 1:100,000 epinephrine). The laser used was a DMC Thera Blu Laser with a power of 3.5 W ± 20%, wavelength of 405 nm ± 10 nm, and a diode laser source with a pen-shaped optical fiber applicator. Only one 5-second cycle was needed to achieve complete surface ischemia, with the fiber remaining 2 mm away from the lesion. After some time, there was no longer any edema in the irradiated region, nor pain or discomfort,

allowing for the discontinuation of postoperative analgesics. Moreover, the lesion went into complete remission, with a very satisfactory aesthetic result.

Discussion: Due to its wavelength, the blue laser is more effective in vascular lesions. Furthermore, it promotes the modulation of inflammation, resulting in an improvement in pain.

Conclusion: The photocoagulation technique using a 450 nm diode laser for vascular anomalies significantly reduced the operation time, eliminating pain in the postoperative period. Additionally, it was noted that the blue diode laser has a greater interaction with hemoglobin, which absorbs photothermal energy, resulting in more effective photocoagulation compared to the same laser operating in the infrared wavelength.

P-035

Letícia Bezinelli, Mariana Henriques Ferreira, Diele Barreto, Fernanda de Paula Eduardo (Brazil)

Category: Systematic or narrative review

Title: PHOTOBIO-MODULATION IN PREVENTING ORAL MUCOSITIS DURING 5-FLUOROURACIL-BASED CHEMOTHERAPY

Aim: We aimed to describe the photobiomodulation (PBM) protocol for preventing oral mucositis (OM) in patients undergoing 5-fluorouracil (5-FU)-based chemotherapy regimens.

Material and methods: This retrospective study included cancer patients receiving 5-FU-based chemotherapy protocols at a private hospital in Brazil from February 2020 to August 2022. Patients received one session of intraoral, punctual PBM using a low-intensity diode laser (Therapy EC - DMC, São Carlos, SP, Brazil) on each of the first two days of the 5-FU cycles. PBM parameters included a spot area of 0.09 cm², wavelength of 660 nm, power density of 1.1 W/cm², and energy density of 11.1 J/cm². The duration of each session averaged 560 seconds, with a cumulative dose of 170.94 J/cm².

Results: The study included 64 patients, predominantly men (62.5%), diagnosed with colorectal (43.75%) and pancreatic (29.68%) cancer, with a mean age of 60.64 years (range, 29-84). The FOLFOX regimen was the most common (42.18%) among six regimens incorporating a