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**CICERO DAYVES DA SILVA BEZERRA**

**Dentistry Nove de Julho University**

**Hability in Laser in Nove de Julho University**

**Master's student in Biophotonics applied to health Sciences by Nove de Julho University**

**Postgraduate in Implantology by FAMOSP**

**EFFECT OF PHOTOBIOMODULATION ON THE SALIVARY GLANDS OF PATIENTS WITH BENZODIAZEPINE-INDUCED HYPOSSALIVATION: DOUBLE BLIND RANDOMIZED PLACEBO-CONTROLLED CLINICAL STUDY**

**Authors: Cícero Dayves da Silva Bezerra, Maria Lúcia Zarvos Varellis, Vanessa Christina Santos Pavesi, Sandra Kalill Bussadori, Alessandro Melo Deana**

**ABSTRACT** s

Depression is the most common mental illness and antidepressants are in the first line of treatment of depressed patients. This therapeutic class is inevitably associated with side effects and adverse reactions, xerostomia being a symptom that seems to be transverse to them all. Saliva performs multiple functions and plays a vital role in protecting the health of the soft and hard tissues of the oral cavity. Reductions in salivary flow are most often manifested as dry mouth, and this is the subjective complaint called xerostomia. Although xerostomia is the most frequent indication of reduced salivary production, it is not invariably associated with hyposalivation. The user of antidepressant drugs has a number of important systemic and oral complications. Treatment for salivary changes remains unknown, but low-level laser therapy has been shown to be effective in improving salivary flow in patients with xerostomia due to diabetes, Sjogren's syndrome, chemotherapy and radiotherapy for head, neck and lung cancer. This randomized controlled trial aims to evaluate oral symptoms related to salivary gland function and mucosal condition of depressed patients, as well as the effects of photobiomodulation on salivary flow. Sixty patients will be included in the protocol, after signing the Informed Consent Form. They will undergo anamnesis, physical evaluation and oral health self-perception questionnaires and symptoms related to salivary gland function and then will be divided into two groups: Photobiomodulation (PBM) (n=30) ; will have their larger salivary glands irradiated with Diode laser (808nm, 4J per point, 40s) and placebo (PCB) (n=30) , which will be subjected to a simulation, where the application protocol will be repeated, but with the laser off. Previous and post treatment sialometries will be performed to compare saliva volume. Biochemical analysis, in which total protein and calcium will be measured, will also be performed.

**KEYWORDS:** photobiomodulation, low intensity laser, xerostomia, hyposalivation, depression