

INVESTIGACIÓN - ODONTOLOGÍA

**EFFECT OF PHOTOBIOMODULATION ON THE SALIVARY GLANDS OF
PATIENTS WITH HYPOSALIVATION INDUCED BY THE USE OF
BENZODIAZEPINES: DOUBLE-BLIND RANDOMIZED PLACEBO-
CONTROLLED CLINICAL STUDY**

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Introduction: Depression is one of the most common mental illnesses. Benzodiazepines are the mainstay of treatment for those affected by this

condition and class of drugs is associated with adverse reactions, one of which is hyposalivation. Saliva performs multiple functions and plays a vital role in protecting oral health. Reduced salivary flow is most often manifested by symptoms of dry mouth, a subjective complaint called hyposalivation. Users of antidepressant medication have a number of important systemic and oral complications, including hyposalivation. The infrared laser has been shown to significantly improve salivary flow in patients with hyposalivation due to diabetes, hypertension and chronic renal failure. Objective: evaluating the volumetric and biochemical parameters of unstimulated and stimulated saliva samples before and after the application of photobiomodulation in patients with depression taking benzodiazepines. Material and Method: Forty-eight participants were included in the protocol, after signing the Informed Consent Form (ICF), they underwent an anamnesis, physical assessment and questionnaires on self-perceived oral health and symptoms related to salivary gland function and were then randomized into two groups: Photobiomodulated (FBM) (n = 24) ; their major salivary glands were irradiated with a diode laser (808nm, 4J per point, 40s) and SHAM (n = 24) , which underwent a simulation. We performed pre- and post-treatment sialometry to compare saliva volume and biochemical analysis, where we measured total proteins and calcium.. Results: 58% of patients believe that hyposalivation related to other oral problems, with hyposalivation being the most prevalent alteration. After the photobiomodulation protocol, the FBM group showed a significant increase in salivary flow, unlike the SHAM group, as well as an increase in biochemical elements. We observed significant differences in both volume and biochemical elements. Conclusion: Photobiomodulation caused a significant improvement in sialometric and biochemical parameters in the samples analyzed from these groups of patients.

Palavras-chave: photobiomodulation; hyposalivation; depression.