**TREATMENT OF HERPES SIMPLEX LABIALIS WITH ANTIMICROBIAL PHOTODYNAMIC THERAPY: PROSPECTIVE, RANDOMED AND DOUBLE-BLIND CLINICAL TRIAL WITH 12 MONTHS FOLLOW UP**

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**ABSTRACT:** The labialis infections by Herpes Simplex Virus type 1 (HSV-1) are contagious and cause discomfort and pain, in addition to being recurrent. The gold standard treatment is acyclovir, but there is viral resistance and does not prevent recurrence. Antimicrobial photodynamic therapy (aPDT) is a promising approach, because in addition to its excellent topical antiviral effect, it does not induce resistance and prevents recurrence, according some case reports. This controlled, randomized, double-blind, twelve-month follow-up clinical trial aims to compare the use of aPDT (660nm, 100mW, 120J/cm2, 0.005% methylene blue) with topical acyclovir therapy in the treatment of herpetic lesions in stages of vesicles and ulcers through the evaluation of the time to resolve the lesion Two groups: G1- experimental group- aPDT and acyclovir placebo (n= 12) and G2- control group- acyclovir treatment and aPDT placebo (n= 12) will be formed. Secondary variables are: pain (visual analogic scale), analysis of cytokines by ELISA (IL1β, IL-6, TNF-α, IL, 10), quantification of HSV-1 by RT-qPCR and recurrence. The lesions will be evaluated 3 and 7 days after the proposed treatment (treatment effectiveness). Follow-up in month 1, 6 and 12 after intervention (recurrence assessment). A questionnaire will assess the impact of oral health on the participants' quality of life (ohip-14), on the first day and after one year of care. For statistical analysis: ANOVA two-way, complemented by the Bonferroni test. We expect a shorter interval of time for remission of the disease, without recurrence of the lesion at the site where aPDT was applied.

**KEY WORDS:** photodynamic therapy, cold sores, herpes simplex, photobiomodulation, laser

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