

Background: Diabetes mellitus (DM) is a chronic disease characterized by hyperglycemia due to changes in the hormone insulin. The most common type is type 2 (DM2), which has insulin resistance as one of its manifestations. Several metabolic changes affect these patients, including endothelial dysfunction and vascular and neurological disorders, as well as impact on quality of life, mental health, and sleep. Pharmacological therapy is one of the main interventions, associated with adaptations in the diet and physical activity routine. However, patients with DM2 do not adhere to treatment for various reasons and the disease continues its progression, burdening the entire health system and impacting the lives of this individual and his entire community. Photobiomodulation therapy (PBMT) appears as an alternative because it acts on energy metabolism, the side effects are negligible, and its non-invasive application can favor adherence. Several scientific studies have shown its effectiveness in glycemic control in an experimental model and the first studies with humans are beginning to emerge to consolidate this possibility.

Objectives: To verify the effects of PBMT by infrared LED on blood glucose levels and consequent impact on the biopsychosocial context of patients with DM2. Therefore, initial and final laboratory tests of fasting blood glucose, glycated hemoglobin, HOMA-IR index and application of quality of life and sleep questionnaires, perception of pain, sensitivity and mental health will be carried out.

Methods: Randomized, double-blind controlled trial with sham group. Sample space of 36 volunteers diagnosed with DM2, distributed in: sham (irradiation with zero parameters), panel (irradiation by the Joovv Elite system of the whole body) and blanket (irradiation with a flexible blanket prototype applied to the abdomen and bilaterally to the quadriceps femoris, hamstrings, triceps surae, arm and forearm). The volunteers underwent initial and final assessments consisting of laboratory tests (fasting blood glucose, glycated hemoglobin and HOMA-IR index) and questionnaires (Diabetes Quality of Life-Brazil-8, Neuropathic Pain Questionnaire 4, painDETECT, Sleep Quality Index of Pittsburgh, Depression, Anxiety and Stress Scale). Participants will be irradiated (active or not) every other day within a 12-day period.

Results, Conclusion, and Implications: As this is a study protocol, there are no results, conclusions, and implications to be presented.

Keywords: Photobiomodulation, Type 2 diabetes mellitus, biopsychosocial impact

Conflict of interest: The authors declare no conflict of interest.

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PREVALENCE AND ASSOCIATION OF VULVOVAGINAL SYMPTOMS WITH AGE GROUPS IN BRAZILIAN WOMEN: A CROSS-CROSS STUDY

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Background: Several studies have shown that perimenopausal, menopausal and postmenopausal women have a high prevalence of vulvovaginal symptoms, such as itching, burning, pain, irritation,

dryness and vaginal odor. However, knowledge about such symptoms in the younger Brazilian public is scarce.

Objectives: To verify the prevalence of vulvovaginal symptoms and the association of these symptoms with the different age groups of Brazilian women.

Methods: This is a cross-sectional study with a quantitative approach, carried out between October 2021 and August 2022 with Brazilian women aged ≥ 18 years, literate, with internet access and who had an email account, recruited from the disclosure of the search on social networks. The study was developed based on the guidelines of the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) initiative. To obtain the data, the participants answered a questionnaire via Google Forms that contained sociodemographic and health data and the Vulvovaginal Symptoms Questionnaire (VSQ) to screen for vulvovaginal symptoms. Data were analyzed descriptively using the chi-square test to verify the association between vulvovaginal symptoms and age groups using the SPSS program (version 26.0). Age-related data were categorized into 3 groups, 18 to 35 years old (n=168), 36 to 50 years old (n=45) and 51 to 79 years old (n=12) for analysis, adopting a significance level of 5%.

Results: The study included 225 women with a mean age of 28 years (minimum age 18 and maximum age 79 years), who had at least one vulvovaginal symptom according to the VSQ-Br. Regarding vulvovaginal symptoms in general, there was a prevalence of 55.1% behavior, 31.6% burning, 20.4% pain, 28% intercourse, 30.7% dryness, 64% discharge and 28% smell. As for the results by age group, the symptoms were more prevalent among women aged 18 to 35 years (itching 72.4%, burning 69%, pain 78.3%, protection 74.6%, dryness 60.9%, discharge 82, 6% and smell 69.8%). As for the associations between the variables (vulvovaginal symptoms and age groups), there was a significant association between dryness ($p < 0.004$) and discharge ($p < 0.001$) with the age group variable.

Conclusion: According to the presented results, young women may experience one or more vulvovaginal symptoms. As for the association of variables, there was an association between age and symptoms of discharge and dryness.

Implications: By presenting data by age group, it is possible to understand the prevalence of symptoms in the young public, in addition to directing possible interventions due to the identification of the most prevalent symptoms in this public. However, due to the characteristics of the participants, there is a limitation regarding the analyzes related to the elderly population.

Keywords: Women's Health, Prevalence, Signs and Symptoms

Conflict of interest: The authors declare no conflict of interest.

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NEUROMUSCULAR FUNCTION IN PEOPLE WITH CHRONIC KIDNEY DISEASE ON HEMODIALYSIS INITIATION

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Background: The progression of chronic kidney disease (CKD) to its most advanced stage, which usually requires hemodialysis, causes