

# EFFECT OF OZONE THERAPY ON THE QUALITY OF LIFE OF PATIENTS WITH XEROSTOMIA AND HYPOPTYALISM FOLLOWING HEAD AND NECK RADIOTHERAPY: A CROSS-SECTIONAL STUDY

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## RESUMO

Annually, over half a million patients worldwide are diagnosed with head and neck cancer, and of these cases, approximately 75% are treated with radiotherapy. This frequent radiation affects the glandular tissues in the area, leading to the development of xerostomia/hyposalivation. This deficiency or absence of saliva can cause various issues such as pain, susceptibility to ulcers, dysphagia, dysphonia, among others, impacting the quality of life of these patients with negative emotional and mental consequences. Ozone therapy has proven to be very effective in various fields of medicine and dentistry, particularly due to its antioxidant properties, as well as its ability to enhance vascularization and the immune system. The objective of this study was to evaluate the quality of life of patients with xerostomia/hyposalivation after head and neck radiotherapy before and after treatment with ozone gas. The study was submitted to the Research Ethics Committee and began its execution after approval. Eleven patients were evaluated, and the Related Quality of Life Scale (XeQoLS) questionnaire was administered before and after ozone treatment, which was applied bilaterally to the parotid gland in its gaseous form at a concentration of 10 µg/mL (micrograms), 1 mL per point, at 3 distinct points. There were 9 male patients and 2 female patients. The average scores before treatment were about 51.38 (maximum of 60) and after ozone treatment were 15.55 (minimum of 0). All patients reported improved salivation after treatment. It can be concluded that ozonized gas was effective in improving the quality of life for patients with xerostomia and hyposalivation after head and neck radiotherapy. This work was approved by the Ethics and Research Committee, approval number 6.277.176.

**PALAVRAS-CHAVE:** Xerostomia, Radiotherapy, Ozone therapy, Ozone, Quality of life

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