



## Stomatological Application of Ozone against Viruses

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### Abstract

Ozone therapy has been successfully used in medicine, it has been established as a safe and effective method for the treatment of different diseases for more than 100 years (1840).

In dentistry, it has shown enormous benefits for both the clinician and the patient, it is considered as a possible adjuvant within the periodontics. The oxidative potential of ozone is useful in both infectious processes and healing, as it accelerates the physiological healing process, with significant reduction in pain.

The great oxidative capacity has led to its widespread application in dentistry. However, it should be taken into account that high concentrations have the ability to kill any living organism.

**Keywords:** Ozone; Dentistry; Periodontics Therapy; Wound Healing

### Introduction

The word ozone comes from the Greek word "ozein", meaning "smell". It was first used in 1840, at the University of Basel, Switzerland, by the German chemist Christian Frederick Schonbein, who is regarded as the "Father of Ozone Therapy" [1-3].

Ozone, as indicated by its molecular formula  $O_3$ , consists of three oxygen atoms and is used in three different forms [3,4]. It is an unstable gas and quickly leaves the nascent oxygen molecule to form oxygen gas [5,6].

Clinical evidence in the literature of ozone applied in dentistry has had results that enhance healing processes, there are reports of their application in periodontal therapies, since their effects on the soft and hard tissues of the oral cavity have been favorable [7,8].

### Aim of the Study

This case report aims to publicize the benefits of ozone, its application in the different dental specialties, especially periodontics through its antibacterial, healing and regenerating effect.

### Clinical Case Report

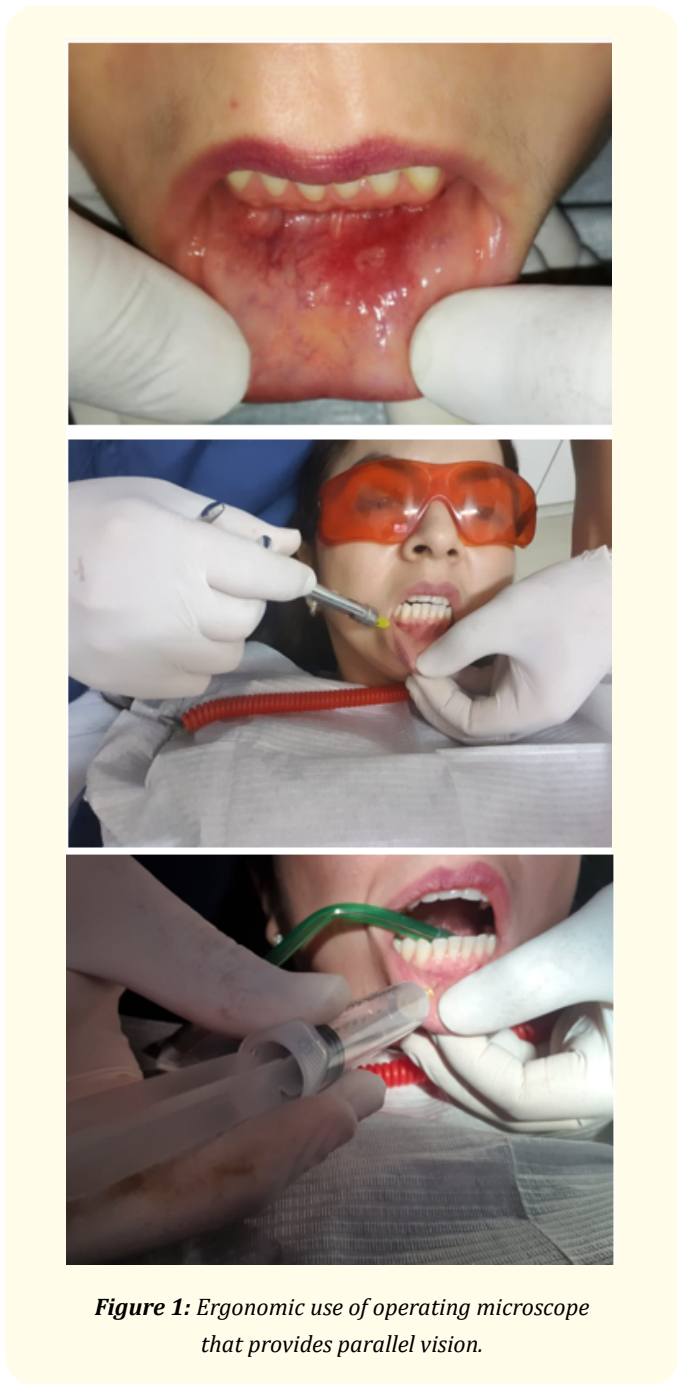
Female patient of 39 years old, white, married, dentist. Listen to the consultation for difficulty and pain to chewing as when passing saliva.

It shows that it consumes a healthy diet, that work stress pictures have been presented.

The clinical examination has edematous lesions of 0.8 mm in diameter, reddened, surrounding in the lower lip.

On the first visit, the full evaluation of the patient was performed, full blood count tests were requested to determine the type of causal agent. As well as a first application of ozone in the form of gas and oil for topical application.

**Initial stages**



**Figure 1:** Ergonomic use of operating microscope that provides parallel vision.

On the second visit, at 3 days he observed the remission of the afta at 80% with the change of coloration and improvement by the patient.

**Final stage**



**Figure 2**

**Discussion and Conclusion**

Since the 1980s, topical ozone has been used in herpetic lesions; it is observed that it accelerates the healing process, as ozone neutralizes herpetic virions by direct action, inhibiting the possibility of bacterial suprainfections and stimulating tissue healing through an increase in circulation. Ozone has been shown to be one of the most effective oxidizers in dentistry.

Healing is a complex, multicellular process that takes place after an injury. In the oral mucosa, this process is coordinated by various cell types including fibroblasts, endothelial cells, macrophages and platelets. The migration, infiltration, proliferation and differentiation of these cells culminate with an inflammatory response, and it is now that the formation of new tissue is carried out to finally obtain the closure of the wound.

**Informed Consent**

The patient signed the informed consent, about the publication of his case and the taking of photographs for the documentation thereof.

**Conflict of Interest**

No conflict of interest.

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