ACUTE ULCERONECROTIZING GINGIVITIS (AUNG). AN ALTERNATIVE OF TREATMENT WITH OZONIZED OIL

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Summary

An open controlled randomised clinical trial to assess the efficacy and safety of ozonized oil (oleozon) in the treatment of AUNG were carried out with patients from the periodontology consult of the odontology services of "Camilo Cienfuegos" University Hospital. The evaluation period was from January of 2003 to December of 2005. Forty two patients of both genders, over 18 years of age, who gave their written consent to participate were included. Patients with chronic diseases were excluded, as well as those with mental impairments, pregnant women, and those who had used chemotherapy or immunosupressor drugs at least 15 days prior to the inclusion. The Ozonized oil was administered topically for 7 days, with an intermediate clinical assessment on the third day, and a final assessment one day after the completion of the treatment. Patients from the control group were treated with sodium perborate. Clinical symptoms such as pain, halitosis, gingival bleeding and inflammation were assessed. No significant differences were observed between both groups of treatments, though a tendency to clinical improvement was seen in the group that used oleozon. Mild adverse reactions were reported in three patients who used sodium perborate, but not with those who used oleozon, supporting the safety of this product in the treatment of AUNG. Taking into consideration the safety profile and the lower cost, we consider that ozonized oil could be a useful and safe therapeutical alternative in patients with AUNG.

Key words: Ozonized oil, Acute Ulceronecrotizante Gingivoestomatitis, Clinical Trials

Introduction

The Acute Ulceronecrotizing Gingivitis (AUNG) is a destructive inflammatory illness that can affect the marginal and papillary gum and with less frequency it adhered, being able to produce necrosis of the epithelio and of the connective weaving. The AUNG can appear in healthy mouths or superimposed to the gingivitis or the periodentitis, and the emotional stress plays an important role in its apparition.(1)

Diverse medicines have been utilized in the treatment of the AUNG with variable results, the most employed are related to the imidazoles, specifically the Metronidazol; in our middle the Sodium Perborate has been utilized frequently that contains not less than one 9% of active oxygen, that corresponds to a 86,5% of NaBo3H2O. It is employed like colutorio in solution al 2%, with a so much, beneficial effect by its alkaline residue as by its germicidal effect. Its use prolonged has related to irritation of the mucous membrane and with hypertrophy of the lingual papillae (2).

Various studies have indicated the germicidal and anti-inflammatory power of the oil ozonized, and it scarce toxicity by trite way, being a product of good stability and low cost. (3,4) Keeping in mind these antecedents was decided to carry out this work to evaluate the efficacy of the Oleozón in patients affected of the AUNG, to determine the symptoms and signs present at the end of the treatment, as well as to identify and to quantify the possible adverse events during the study.

Material and Methods

A clinical study was carried out randomized, open and controlled in which 42 patients originating in Service of Periodontics of the University Hospital "Camilo Cienfuegos" of Sancti Spiritus were included, that were diagnosed clinically with a AUNG and with an upper age at the age of 14, of both sexes, race and with the possibility to receive ambulatory treatment. The patients were excluded that received antibioticotherapic the 7 prior days to the inclusion, pregnant women or in lactation, with severe hematological affections or bleeding risk, with acute infectious illnesses, as well as in convalescence, presence of some uncompensated chronic illnesses (Mellitus Diabetes, heart Disease, cardiac and/or renal Shortage), arterial hypertension, severe psychiatric diseases or cancer, antecedents of allergy to some of they prepared or components and the ones that did not offer their consent of participation. The approval of the Institutional Scientific Council as well as of the Committee of Ethics was obtained. The assignment of the patients was done of random form according to a board of random numbers generated automatically continuing the system ASAL. They conformed two groups of patients, the first one received Oil Ozonized (Oleozón) of trite form three times al day by a period of 5 days. The second group received Sodium Perborate 2% topic, in the shape of mouthfuls, three times al day by the same period of time. The first application to each patient was carried out in the consultation for demonstration to the patients, which would continue its ambulatory processing. The

patients were included that offered their consent reported. The main variable of answer to measure the efficacy of the processing was the clinical healing at the end of the processing (5to day) which was categorized in: It cured: when they have disappeared all the symptoms and signs evaluated in the illness. not cured: when they remit not al less than two of the symptoms and signs evaluated. The adverse events occurred during the processing, as well as their intensity, they were obtained through the clinical observations at 72 o'clock hrs and al final of the processing, which were classified in light, moderates, less serious and serious, in dependence of the degree of incapacity, hospitalization and death of the patient.

Results

Table 1: Signs and symptoms before the processing in both groups. Hosp Univ. "Camilo Cienfuegos". SS

Signs and symptoms	Group A		Group B		Total	
	No	*%*	*No*	*%*	*No*	*%*
Halitosis	19	90.4	19	90.4	38	90.4
Pain	17	80.9	19	90.4	36	85.7
Pseudomembrane	8	38	6	28.5	14	33.3
Bleeding	18	85.7	18	85.7	36	85.7

Source: Data of medical histories
Group A: Ozonized oil Group B: Sodium perborate

In the table 1 appears the distribution of patients by group of treatment according to symptoms and signs presented before the start of the therapy. The signs and symptoms that were observed with more frequency were the halitosis, the pain and the bleeding in both groups, with more of the 85%; being less frequent the presence of the pseudomembrane with a 33,3%, not being significant the difference of these symptoms for the different groups.

Table 2: Distribution of patients by group of study according to symptoms and signs present at 5to day of treatment. .Hosp Univ Camilo Cienfuegos.SS

Signs and symptoms	Group A		Group B		Total	
	No	*%*	*No*	*%*	*No*	*%*
Halitosis	2	10.5	3	15.7	5	13.1
Pain	2	11.6	2	10.5	4	11.1
Pseudomembrane	0	0	1	16.5	1	7.1
Bleeding	1	5.5	2	11	3	8.3

Source: Data of medical histories
Group A: Ozonized oil Group B: Sodium perborate

In the table 2 appear the distribution of patients by group of treatment according to symptoms and signs presented at 5 days of treatment. The signs and symptoms that were observed with more frequency were the halitosis (13.1%) and pain (11.1%), being less frequent the presence of the pseudomembrane (7.1 %) and bleeding (8.3%).

Table 3: Distribution of patients according to the answer at the treatment al 5to day. Hosp Univ. "Camilo Cienfuegos". SS

Answer at the treatment	Group A		Group B		Total	
	No	*%*	*No*	*%*	*No*	*%*
Cured	19	90.4	19	90.4	38	90.4
Not cure	2	9.6	2	9.6	4	9.6
Total	2	100	21	100	42	100

Source: Data of medical histories x2 = 5.1 p=0.214
Group A: Ozonized oil ***Group B: Sodium perborate***

In the table 3 appear the distribution of patients patients according to the answer at the treatment at 5to day, we see that not a significant difference among both groups existed. The percentage of patients cured above the 90% for both drugs, with alone 4 patients classified as done not cure (9.6%) being similar the quantity of failure for each drug, x2 =5.1, p = 0.214.

Table 4: Adverse events obtained with the use of the Sodium Perborate, characteristics of the patients and its causal relation. Hosp Univ. "Camilo Cienfuegos". SS

Code	Age	Sex	Race	RA	Severity	Results	C R
PLJ (7)	19	F	W	Irritation mucous membrane	light	Persist	Very probable
MVL (11)	31	F	W	Irritation mucous membrane	light	Recovered	Very probable
JLV (15)	34	F	W	bleeding	light	Recovered	Possible

Source: Data of medical histories F: female W: white RA: Adverse Reaction C R:Causal Relations

In the table 4 appear the different adverse events occurred, all of them was presented with the employment of the Sodium Perborate, we observe irritation of the mucous membrane in two patients and in the other we observe bleeding, in all the cases was classified as a light reaction, and the causal relation of very probable respect at the drug,

Discussion

The Acute Ulceronecrotizing Gingivitis (AUNG) is a destructive inflammatory illness that can affect the marginal and papillary gum. Diverse modalities have been utilized in the treatment of the AUNG with differents results.
In our study, we observed a post-treatment improvement of symptoms with the application of both the oleozone and of sodium Perborate, which suggests the efficacy of both drugs for the treatment of this disorder.
Contrary to our results, a more clear improvement of pain and bleeding after the palpation was observed in a study carried out previously (5) but the presence of the pseudomembrane was not affected. In general the anti-inflammatory effect of the ozone through the inhibition of the prostaglandin favors the evolution of the patients (6). On the other hand, the adequate brushed gingivodental drags the waste of necrotic epithelia and several kinds of microorganisms present in the Pseudomembrana; besides the antiseptic effects favors the efficacy of the product (7).

Oleozon have been used in the treatment of several infectious diseases. When we ozonized the vegetable oils, the ozone that contains a mixture ozone/oxygen attacks the double links of the unsaturated greasy acids of the triglycerides that conform the vegetables, occurring a series of reactions that finish in the formation of active principles (ozonides and peroxides), which they possess a strong germicidal character against virus, bacteria and mushrooms, doing it useful in septic processes. This is the mechanism by which these substances achieve its anti-infectious effects (8,9). Serious adverse reactions have not been reported in several studies done in Cuba with Oleozone (9,10).

Conclusions

1. The ozonized oil, administered topically, has an adequate efficacy in the treatment of the AUNG, which is very similar to the one obtained with Sodium Perborate.
2. Adverse reactions were not observed in 21 patients treated with Oleozon and were reported in three of 21 treated with sodium perborate, suggesting a better safety profile for Oleozone.

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