

Effect of Inhabitation Mouthwash Solution Containing Chlorine Dioxide (Pro Fresh®) on Oral Malodor

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授与機関名 順天堂大学

学位記番号 甲第 1561 号

二酸化塩素含有洗口剤 (Pro Fresh[®]) による口臭抑制効果

(Effect of Inhibition Mouthwash Solution Containing Chlorine Dioxide (Pro Fresh[®])
on Oral Malodor)

澤 政樹 (さわ まさき)

博士 (医学)

Abstract

In the recently, Interest in oral malodor increases very much, and the people troubled with oral malodor increase year by year. Generally, as a course corresponding to the patients with a chief complaint of oral malodor, we often choose dentistry. It is the present conditions that rack the brains about correspondence of various types of oral malodor such as the improvement of the symptom not being found even if dental caries and periodontal disease recovered completely on the dental clinic side.

In this study, we investigated mouthwash containing the chlorine dioxide on the reduction of oral malodor and increase of saliva, to a volatile sulfur compound (CH_3SH , $(\text{CH}_3)_2\text{S}$ and H_2S) ingredient of the oral malodor.

Subjects were 92 patients (Control group: 2males, 3females, 30.8 ± 4.0 yr. Mouthwash group: 28 male, 59 female, 36.9 ± 1.3 yr.) who attended the clinic with a complaint of oral malodor. We was examined at PRE and POST the experiment (we measured within one month), we made subjects use mouthwash about gas intraoral, exhalation gas, resting saliva quantity, salivation ability, a buffer capacity of saliva after use every day. Oral malodor was measured using the Oral Chroma gas chromatograph.

After using mouthwash solution, three elements gas (CH_3SH , $(\text{CH}_3)_2\text{S}$ and H_2S) were decreased with the intraoral gas and the exhalation gas. The H_2S significantly decreased with the intraoral gas (from 225.8 ± 28.1 ppb to 41.1 ± 8.8 ppb) and the exhalation gas (from 212.0 ± 50.4 ppb to 34.6 ± 16.6 ppb), respectively. The quantity of resting saliva significant increased from 1.3 ± 0.1 ml to 1.7 ± 0.1 ml, salivation ability significant increased from 4.5 ± 0.3 ml to 5.1 ± 0.3 ml. The control group did not change all examination.

These results suggest that the mouthwash containing the chlorine dioxide has inhibitory effects of the oral malodor.