

C-12. The change of oral volatile sulfur compounds(VSC) concentration after periodontal treatment

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Background

Oral malodor may cause a significant social or psychological handicap to those suffering from it. Oral malodor has been correlated with the concentration of volatile sulfur compounds (VSC) produced in the oral cavity. Specific bacteria identified in the production of VSC have been reported and many of these bacteria are commonly suspected periodontal pathogens. The aim of this study was to estimate VSCs variation after periodontal treatment.

Materials & Methods

Twenty subjects with probing depth (PD) ≥ 5 mm (experimental group) and 20 subjects with PD < 5 mm (control group) participated. VSC concentration measurement was made with gas chromatography. VSC concentration was measured at pre-treatment, 2 weeks after scaling and 1 month after periodontal treatment (root planning and flap operation). Maximum probing depth and bleeding on probing (BOP) were also examined at pretreatment and 1 month after periodontal treatment.

Results & methods

The conclusions were as follow:

1. In the experimental group VSC concentration and CH₃SH/H₂S ratio were higher than control group. ($p < 0.05$)
2. Both figures of VSC concentration and CH₃SH/H₂S ratio showed decrease after the periodontal treatment. But only CH₃SH/H₂S ratio after 1 month periodontal treatment was statistically significantly different from pre-treatment. ($p < 0.05$)
3. CH₃SH/H₂S ratio tended to be on increase according to maximum probing depth and bleeding on probing.

Periodontal disease could be a factor that caused oral malodor and oral malodor could be decreased after periodontal treatment.