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The effect of xylitol and fluoride on remineralization for primary tooth enamel caries *in vitro*

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Abstract The effect of fluoride and xylitol on remineralization at the early stage of the enamel caries in primary tooth was studied. The samples were divided into four groups (control, 10% xylitol, 950 ppm NaF and 10% xylitol+950 ppm NaF) and analyzed by the using single thin section method and pH-cycling model *in vitro*. The remineralizing ratio were control −8.9%, xylitol −0.4%, NaF 8.3% and xylitol+NaF 32.4%, respectively. Xylitol+NaF group particularly showed significantly smaller ΔZ value compared with 0 days ($P < 0.05$). Therefore we assume that the effect of xylitol and fluoride are additive. We concluded that xylitol and fluoride treatment to the tooth enamel may be an effective caries-preventive measure in both primary and permanent tooth enamel.

Key words Fluoride, Primary tooth, Remineralization, Xylitol

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