Galla chinensis Compounds Remineralize Enamel Caries Lesions in a Rat Model.

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Abstract

Objectives
To investigate the effect of Galla chinensis chemical compounds on enamel caries remineralization in rats.

Methods
A total of 40 rats were inoculated with Streptococcus sobrinus 6715 and fed a cariogenic diet (Keyes 2000). The rats were randomly divided into 4 groups and treated topically twice a day with each of the following extracts (or control) for 5 weeks: distilled and deionized water (DDW, negative control); 1,000 ppm NaF (positive control); 4,000 ppm G. chinensis crude aqueous extract (GCE), or 4,000 ppm gallic acid (GA). After the experimental period, Keyes' caries diagnosis and scoring technique was applied as a preliminary evaluation on the molar teeth. For more accurate remineralization data, the residual enamel volume of the first molar and the mineral density (MD) of the enamel were further analyzed by micro-CT.

Results

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Conclusion
G. chinensis compounds remineralize enamel caries lesions in a rat model.

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