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Green Tea in Dentistry

Diş Hekimliğinde Yeşil Çay

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Green tea is a well known drink nowadays it was common in china since ancient times. Recent past green tea has passed through many researches to know and benefit with the properties. In the field of dentistry its role is still concise even though countless research are being conducted and this letter is in correspondence to illustrate the application of green tea dentistry.

Intervention study has shown that oral and topical administration of a tea preparation significantly reduced the size of oral lesions and the incidence of micronucleated oral mucosa cells in leukoplakia subjects[1].

Growth of cell lines derived from oral leukoplakia patients and oral cancer patients was inhibited by EGCG after a 5-day treatment. Treatment with epigallocatechin-3-gallate (EGCG), epigallocatechin (EGC), or epicatechin, also resulted in growth inhibition of oral squamous cell carcinoma cells. Although a single administration of these concentrations of tea polyphenols is probably not sufficient to elicit an anticancer effect, it is possible that, by holding tea leaves in the mouth regularly over the course of day, effective levels of catechins or theaflavins could be maintained in the oral cavity. The amount of EGCG available to oral mucosa when the tea is still in the mouth should be similar to the saliva washout (9.8 mM) or black tea extract (162 µM).

Both black and green tea infusions inhibited salivary amylase and the consequent intraoral hydrolysis of starch in human volunteers. Another study with human volunteers showed that rinsing of the mouth with 2 mg/mL EGCG solution followed by a 10% sucrose solution 30 min later prevented lowering of pH induced by cariogenic bacteria.In vivo and in vitro experiments showed that a green tea extract inhibited caries formation in hamsters and increased the resistance of human enamel to acid.2 Black tea extracts decreased caries formation by 56.6% on a regular diet and by 63.7% on a cariogenic diet in hamsters[3]. Tea polyphenols (1–4 mg/mL) strongly inhibited attachment of Str. mutans and other bacteria to collagen in vitro. Related studies indicated that tea polyphenols also inhibited acid production by mutans streptococci as well as by Actinomyces viscosus that are part of the oral microflora[2].

Role of green tea in dentistry is less researched but am sure after this letter that several other properties are concealed and need to be bought to sight.

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