Analisa efek perendaman susu dan teh hitam terhadap email gigi menggunakan Microcomputed Tomography = Analyses on the effect of milk and black tea on dental enamel using Microcomputed Tomography

Siti Alia Ramadhani, author

Abstrak

Menganalisa efek susu dan teh hitam terhadap demineralisasi email gigi. Mahkota 30 gigi premolar dipersiapkan membentuk kubus gigi (6mm3). Permukaan oklusal dibentuk jendela oklusal dengan menggunakan stiker berukuran 3x5mm2 dan seluruh permukaan gigi lainnya dilapisi dengan varnis tahan asam. Sampel dibagi secara acak ke dalam tiga kelompok dan direndam selama 26 menit dalam larutan remineralisasi: Grup A-susu dan teh hitam ; Grup B-susu ; Grup C-akuabides. Setelah 3 hari perendaman dalam larutan demineralisasi dengan pH 4.4, gigi di scan menggunakan micro-CT. Demineralisasi ditunjukkan dengan mean grey value (MGV). MGV dan standar deviasi pada tiap kelompok secara berurutan adalah: 90.78 ± 19.09, 98.14 ± 24.01, 81.10 ± 20.29. MGV antara ketiga kelompok berbeda bermakna ($p<0.05$), kecuali antara grup A dan B. Aplikasi menggunakan susu saja menunjukkan efek protektif yang lebih tinggi terhadap demineralisasi dibandingkan dengan aplikasi susu dan teh hitam.
.....
This study is aimed to analyze the effect of milk and tea on demineralization of tooth enamel. The coronal parts of 30 sound premolars were prepared into tooth blocks (6mm3). An unvarnished occlusal surface window was created for each tooth by covering the occlusal surface with a 3x5mm2 sticker and painting other surfaces with an acid-resistant varnish. These blocks were randomly allocated into three groups immersed in remineralizing solutions for 26 minutes, respectively: Group A - milk and tea; Group B - milk ; and Group C - deionezed water. After 3 days immersion in a buffered demineralization solution at pH 4.4, micro-CT scans were taken. Demineralization was represented by the mean grey value (MGV). MGV and the standard deviation for each group respectively is: 90.78 ± 19.09, 98.14 ± 24.01, 81.10 ± 20.29. The MGV between the three groups were statistically significant ($p<0.05$), except between group A and B. Application using only milk showed higher protective effect against demineralization compared to application using milk and black tea.