

INTISARI

Kalsium saliva berperan sebagai *buffer* terhadap demineralisasi gigi. Konsentrasi kalsium saliva berhubungan dengan konsentrasi kalsium darah, absorpsi kalsium dalam usus dipengaruhi oleh asupan makanan. Penelitian ini bertujuan untuk mengetahui bagaimana hubungan asupan kalsium, laktosa, protein, dan serat dengan konsentrasi kalsium saliva pada anak laki-laki usia 12-14 tahun.

Penelitian observasi asupan makanan dengan metode *recall* 24 jam selama 5 hari dilakukan pada 20 subyek anak laki-laki usia 12-14 tahun di Panti Asuhan Sancta Maria Yogyakarta. Asupan makanan (kalsium, laktosa, protein, dan serat) dianalisis dengan menggunakan program Nutrisurvey. Konsentrasi kalsium saliva diukur dengan menampung saliva tanpa stimulasi pada pagi hari bangun tidur sebanyak 5 ml, kemudian dilakukan analisa dengan *Atomic Absorption Spectrofotometry* (AAS). Data dianalisis dengan uji korelasi pearson dan regresi linear ganda program SPSS 20 untuk *Windows*.

Hasil penelitian menunjukkan adanya hubungan positif bermakna antara asupan kalsium dan protein dengan konsentrasi kalsium saliva ($r=0,48$ dan $r=0,39$). Tidak ditemukan hubungan yang bermakna antara asupan laktosa dan serat dengan konsentrasi kalsium saliva. Prediksi konsentrasi kalsium saliva dengan prediktor asupan kalsium dan protein adalah $y = 26,101 + 0,086x_1 + 0,001x_2$. Disimpulkan bahwa semakin tinggi asupan kalsium dan protein maka semakin tinggi konsentrasi kalsium saliva; tidak ada hubungan antara asupan laktosa dan serat dengan konsentrasi kalsium saliva pada anak laki-laki usia 12-14 tahun di Panti Asuhan Sancta Maria Yogyakarta.

Kata kunci: asupan kalsium, asupan laktosa, asupan protein, asupan serat, konsentrasi kalsium saliva, anak laki-laki usia 12-14 tahun

ABSTRACT

Salivary calcium acts as a buffer against the demineralization of teeth. Salivary calcium concentration is related to blood calcium concentration, calcium absorption in the intestine is influenced by food intake. The aim of this study was to investigate the relationship between calcium, lactose, protein, and fiber with salivary calcium concentration on male adolescents at the age of 12-14 years old.

An observational study of 20 healthy male adolescents aged 12-14 years old was conducted by recording their food intake with 24 hours food recall method for 5 days in Panti Asuhan Sancta Maria Yogyakarta. Food intake (calcium, lactose, protein, and fiber) was analyzed by using Nutrisurvey program. Saliva samples were collected in a coded capped container as many as 5 ml after woke up in the morning, then the salivary calcium concentration measurement was done by using Atomic Absorption Spectrofotometry (AAS) method. Data analysis was performed by using pearson correlation and multiple linear regression test SPSS 20 for Windows.

Results showed that there is a significant positive correlation between the intake of calcium and protein with salivary calcium concentration ($r = 0.48$ and $r = 0.39$). There was no significant correlation between the intake of lactose and fiber with salivary calcium concentration. The relationship between calcium and protein intake with salivary calcium concentration is showed $y = 26,101 + 0,086x_1 + 0,001x_2$. It was proven that the higher the intake of calcium and protein, the higher the salivary calcium concentration; no relationship between the intake of lactose and fiber with salivary calcium concentration on male adolescents at the age of 12-14 years old in Panti Asuhan Sancta Maria Yogyakarta.

Key words: calcium intake, lactose intake, protein intake, fiber intake, salivary calcium concentration, male adolescents aged 12-14 years old