

**KONSENTRASI ION KALSIUM SALIVA PADA ANAK
DENGAN DAN TANPA *EARLY CHILDHOOD CARIES*
DI TK MASJID KAMPUS UGM**

INTISARI

Kalsium merupakan salah satu komponen anorganik dalam saliva yang memiliki peran penting dalam mempertahankan integrasi jaringan keras gigi. Gigi yang terdemineralisasi akan menyebabkan lesi karies yang ireversibel. *Early Childhood Caries* (ECC) merupakan kondisi dengan lesi karies ireversibel, gigi tanggal akibat karies, atau gigi yang ditumpat akibat karies pada anak di bawah 6 tahun. Penelitian ini bertujuan untuk mengetahui perbedaan konsentrasi ion kalsium saliva pada anak dengan dan tanpa ECC di TK Masjid Kampus UGM.

Penelitian dengan desain studi *cross-sectional* telah dilakukan pada 58 anak prasekolah di TK Masjid Kampus UGM. Pengambilan data dilakukan dengan metode *total sampling*. Setelah subyek diperiksa kondisi rongga mulutnya, subyek dikelompokkan berdasarkan tipe ECC kemudian sampel saliva diambil secara pasif. Konsentrasi ion kalsium saliva diukur menggunakan Spektrofotometer UV-Vis (Hitachi U-2900) dengan satuan mg/mL. Analisis data yang digunakan yaitu uji perbedaan rerata Analisis Variansi (Anava) satu jalur.

Hasil penelitian menunjukkan konsentrasi ion kalsium saliva pada anak tanpa ECC lebih tinggi dibandingkan anak dengan ECC, yaitu $0,605 \pm 0,806$ dengan rerata anak dengan ECC tipe 1 $0,345 \pm 0,059$, ECC tipe 2 $0,230 \pm 0,053$, dan ECC tipe 3 $0,140 \pm 0,017$. Uji Anava satu jalur yang dilakukan menunjukkan adanya perbedaan yang signifikan ($p < 0,05$) antar kelompoknya. Disimpulkan bahwa semakin tinggi konsentrasi ion kalsium saliva, maka semakin baik kondisi karies yang ditemukan pada anak tersebut.

Kata Kunci: konsentrasi ion kalsium saliva, ECC

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ABSTRACT

Calcium is one of inorganic components in saliva which holds an important role in maintaining the integrity of tooth enamel by performing remineralization and preventing enamel from being demineralized by acids. When a tooth is demineralized, irreversible caries lesions occur. The presence of irreversible caries lesions, tooth loss due to caries, or teeth that are filled due to caries in children under 6 years old can be referred to as Early Childhood Caries (ECC). The difference in calcium ion concentration in the saliva of children with and without ECC at TK Masjid Kampus UGM is aimed to be determined by this study.

A cross-sectional study was conducted on 58 preschool children at TK Masjid Kampus UGM. Data collection was performed using total sampling method. After the subjects' oral condition were examined, the subjects were grouped based on ECC type. Then, saliva samples were passively collected. The concentration of calcium saliva was measured using UV-Vis Spectrophotometer (Hitachi U-2900) with units of mg/mL. One-way Analysis of Variance (Anova) was used for data analysis.

The results showed that children without ECC had higher concentration of calcium saliva compares to children with ECC, with a concentration of $0,605 \pm 0,806$ for those without ECC, while children with ECC type 1 had $0,345 \pm 0,059$, $0,230 \pm 0,053$ for ECC type 2, and $0,140 \pm 0,017$ for ECC type 3. One-way Anova analysis indicated a significant difference ($p < 0,05$) among the groups. It is concluded that a higher the concentration of calcium saliva is associated with a better caries condition in children with and without ECC.

Keywords: calcium level in saliva, ECC