

ABSTRAK

HUBUNGAN SERUM FERITIN DAN KADAR KALSIUM SALIVA TERHADAP KEJADIAN KARIES GIGI PADA ANAK TALASEMIA BETA MAYOR USIA 12-15 TAHUN (Penelitian *Cross Sectional* di RSUD Banyumas)

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Latar Belakang. Talasemia beta mayor merupakan jenis kelainan darah secara genetik yang mempengaruhi hemoglobin. Akumulasi zat besi akibat transfusi darah berulang menyebabkan peningkatan kadar serum feritin dan peradangan kelenjar saliva. Laju alir saliva yang rendah mempengaruhi penurunan kadar kalsium saliva dan meningkatkan risiko karies gigi. **Tujuan.** Penelitian ini bertujuan menganalisis hubungan antara kadar serum feritin dan kalsium saliva terhadap kejadian karies gigi pada anak talasemia beta mayor. **Metode.** Penelitian *cross-sectional* dilakukan pada 50 penyintas talasemia beta mayor usia 12-15 tahun di Instalasi Pelayanan Talasemia Terpadu RSUD Banyumas. Kadar kalsium saliva diukur dengan metode kolorimetri menggunakan alat spektrofotometri UV-Vis, kadar serum feritin diperoleh dari rekam medis, dan karies gigi dinilai berdasarkan indeks DMF-T. **Hasil.** Rerata kadar kalsium saliva didapatkan 2,14 mg/dL (di bawah normal), rerata kadar serum feritin didapatkan 5.580,92 ng/mL (di atas normal), dan rerata indeks DMF-T pada penyintas talasemia beta mayor adalah 7,52 (kategori sangat tinggi). Terdapat korelasi negatif yang lemah antara kadar kalsium saliva dan skor karies gigi ($p = 0,01$; $r = -0,34$), serta terdapat korelasi negatif yang kuat antara kadar serum feritin dan kalsium saliva ($p = 0,00$; $r = -0,76$). Kadar serum feritin dan karies gigi tidak berkorelasi signifikan ($p = 0,13$). **Simpulan.** Kadar kalsium saliva yang rendah dapat mempengaruhi kondisi rongga mulut termasuk karies gigi sedangkan kadar serum feritin tidak berhubungan langsung dengan karies gigi. Diperlukan adanya pemantauan dan evaluasi rutin mengenai kadar kalsium saliva, serum feritin, dan upaya preventif karies gigi terhadap anak talasemia beta mayor.

Kata Kunci: Kalsium saliva, karies gigi, serum feritin, talasemia beta mayor.

ABSTRACT

THE RELATIONSHIP BETWEEN SERUM FERRITIN AND SALIVARY CALCIUM LEVELS WITH THE OCCURRENCE OF DENTAL CARIES IN CHILDREN WITH BETA THALASSEMIA MAJOR AGED 12-15 YEARS (A Cross Sectional Study at RSUD Banyumas)

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Background. Beta thalassemia major is a genetic blood disorder that affects hemoglobin. Iron accumulation due to repeated blood transfusions causes increased serum ferritin levels and inflammation of salivary glands. Low salivary flow rate affects decreased salivary calcium levels and increases the risk of dental caries. **Purpose.** This study aims to analyze the relationship between serum ferritin and salivary calcium levels and the occurrence of dental caries in children with beta thalassemia major. **Methods.** A cross-sectional study was conducted on 50 beta thalassemia major survivors aged 12-15 years at the Integrated Thalassemia Service Installation of RSUD Banyumas. Salivary calcium levels were measured using colorimetric method using a UV-Vis spectrophotometry device, serum ferritin levels were obtained from medical records, and dental caries were assessed based on the DMF-T index. **Results.** The mean salivary calcium levels was 2,14 mg/dL (below normal), the mean serum ferritin levels was 5.580,92 ng/mL (above normal), and the mean DMF-T index in beta thalassemia major survivors was 7,52 (very high category). There was a weak negative correlation between salivary calcium levels and dental caries scores ($p = 0,01$; $r = -0,34$), and there was a strong negative correlation between serum ferritin levels and salivary calcium ($p = 0,00$; $r = -0,76$). Serum ferritin levels and dental caries were not significantly correlated ($p = 0,13$). **Conclusions.** Low salivary calcium levels can affect oral cavity conditions including dental caries, while serum ferritin levels are not directly related to dental caries. Routine monitoring and evaluation of salivary calcium levels, serum ferritin, and dental caries prevention efforts are needed in children with beta thalassemia major.

Keywords: Beta thalassemia major, dental caries, salivary calcium, serum ferritin.