

## CORRELATION BETWEEN BLOOD SUGAR LEVELS AND PERIODONTAL TISSUE STATUS IN TYPE 2 DIABETES MELITUS PATIENTS

Frisma Neli\*, Quroti A'yun, Dwi Eni Purwati

Dental Nursing Department Poltekkes Kemenkes Yogyakarta  
Jl. Kyai Mojo no.56, Pingit, Yogyakarta  
555243, 0274-514306

\*Email: frismaneli@gmail.com

### ABSTRACT

**Background :** Diabetes mellitus (DM) is a chronic disease that affects patients for life which is characterized by high blood glucose levels (hyperglycemia) as a result of lack of insulin secretion, impaired insulin activity and both. Type 2 diabetes mellitus is the most common, which is around 90 - 95%. The most common complication in the oral cavity of type 2 diabetes mellitus patients is periodontitis characterized by attachment loss periodontal tissue.

**Objective:** To find out the correlation between blood sugar levels and periodontal tissue status in type 2 diabetes mellitus patients.

**Research Method :** This research was observational analytic with cross sectional data collection in the work area of the UPTD in the inpatient health center of Bandar Pagaralam City in November - December 2018. The population was 125 patients with type 2 diabetes mellitus. The research sample was 100 respondents conducted by purposive sampling technique. Data analysis applied univariate and bivariate (*Kendall's Tau*).

**Research Results :** The results showed that blood sugar levels were 71% in uncontrolled criteria. Periodontal tissue status was 66% with periodontitis. The results of the statistical test using Kendall's Tau obtained a value of  $p = 0.000$  ( $\alpha < 0.05$ ).

**Conclusion :** There was a significant correlation between blood sugar levels and periodontal tissue status in patients with type 2 diabetes mellitus in the work area of the UPTD in the inpatient health center of Bandar Pagaralam City.

**Keywords:** Blood sugar levels, periodontal tissue status, type 2 diabetes mellitus

## HUBUNGAN KADAR GULA DARAH DENGAN STATUS JARINGAN PERIODONTAL PADA PENDERITA DIABETES MELITUS TIPE 2

Frisma Neli\*, Quroti A'yun, Dwi Eni Purwati

Jurusan Keperawatan Gigi Poltekkes Kemenkes Yogyakarta  
Jl. Kyai Mojo no.56, Pingit, Yogyakarta  
555243, 0274-514306

\*Email: frismaneli@gmail.com

### ABSTRAK

**Latar Belakang :** Diabetes melitus (DM) adalah penyakit kronis yang diderita pasien seumur hidup yang ditandai dengan tingginya kadar glukosa darah (*hyperglukemia*) sebagai akibat dari kekurangan sekresi insulin, gangguan aktivitas insulin dan keduanya. Diabetes melitus tipe 2 adalah yang paling banyak diderita yaitu sekitar 90 – 95%. Komplikasi yang paling sering terjadi di rongga mulut pasien diabetes melitus tipe 2 adalah periodontitis yang ditandai dengan kehilangan perlekatan jaringan periodontal.

**Tujuan :** Mengetahui hubungan kadar gula darah dengan status jaringan periodontal pada penderita diabetes melitus tipe 2.

**Metode Penelitian :** Penelitian ini bersifat *observasional analitik* dengan pengambilan data *cross sectional* di wilayah kerja UPTD Puskesmas Rawat Inap Bandar Kota Pagaralam pada bulan November – Desember 2018. Populasi adalah seluruh penderita diabetes melitus tipe 2 sebanyak 125 penderita. Sampel penelitian berjumlah 100 responden dilakukan dengan teknik *purposive sampling*. Analisis data secara univariat dan bivariat (*Kendall's Tau*).

**Hasil Penelitian :** Hasil penelitian menunjukkan kadar gula darah 71% ber kriteria tidak terkontrol. Status jaringan periodontal 66% mengalami periodontitis. Hasil uji statistik menggunakan *Kendall's Tau*, diperoleh nilai  $p=0,000$  ( $\alpha<0,05$ ).

**Kesimpulan :** Didapatkan hubungan yang bermakna antara kadar gula darah dengan status jaringan periodontal pada penderita diabetes melitus tipe 2 di wilayah kerja UPTD Puskesmas Rawat Inap Bandar Kota Pagaralam.

**Kata Kunci :** Kadar gula darah, status jaringan periodontal, diabetes melitus tipe 2