HUBUNGAN *C-REAKTIF PROTEIN* DAN JUMLAH LEUKOSIT PADA PASIEN DIABETES MELITUS

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ABSTRAK

Latar Belakang: DM merupakan penyakit metabolik kronis yang memicu inflamasi sistemik akibat hiperglikemia berkepanjangan. *C-reaktif protein* (CRP) dan jumlah leukosit merupakan biomarker inflamasi yang umum digunakan untuk menilai proses peradangan pada pasien diabetes melitus. **Tujuan:** Menganalisis hubungan antara *C-reaktif protein* (CRP) dan jumlah leukosit pada pasien diabetes melitus. **Metode**: Penelitian observasional dengan desain *cross-sectional* ini melibatkan 54 responden yang dipilih menggunakan teknik *purposive sampling* di UPTD Puskesmas Sungai Durian (07–18 April 2026). Pemeriksaan CRP dilakukan secara kualitatif melalui metode aglutinasi latex, sedangkan jumlah leukosit diukur menggunakan *hematology analyzer*. Data dianalisis menggunakan uji *Spearman Rank*. **Hasil:** Dari 54 responden, sebanyak 38 responden (70,4%) memiliki hasil CRP positif dan 16 responden (29,6%) negatif. Rata-rata jumlah leukosit responden sebesar 15,8 × 10^3/µL. Hasil uji *Spearman Rank* menunjukkan nilai signifikansi p = 0,000 (p < 0,05), yang membuktikan adanya hubungan bermakna secara statistik antara kadar CRP dan jumlah leukosit. **Kesimpulan**: Terdapat hubungan yang signifikan antara *C-reaktif protein* (CRP) dan jumlah leukosit pada pasien diabetes melitus di UPTD Puskesmas Sungai Durian.

Kata kunci: Aglutinasi, *C-Reactive Protein*, Diabetes Melitus, *Hematology Analyzer,* Jumlah Leukosit.

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THE CORRELATION BETWEEN C-REACTIVE PROTEIN AND LEUKOCYTE COUNT IN DIABETES MELLITUS PATIENTS

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ABSTRACT

Background: *DM is a chronic metabolic disease that triggers systemic inflammation due to prolonged hyperglycemia. C-Reactive Protein (CRP) and leukocyte counts are inflammatory biomarkers commonly used to assess the inflammatory process in diabetes mellitus patients.* ***Objective:*** *To analyze the relationship between C-Reactive Protein (CRP) and leukocyte count in patients with diabetes mellitus.* ***Methods:*** *This observational study with a cross-sectional design involved 54 respondents selected using a purposive sampling technique at UPTD Puskesmas Sungai Durian (April 07–18, 2026). CRP testing was performed qualitatively using the latex agglutination method, while the leukocyte count was measured using a hematology analyzer. Data were analyzed using the Spearman Rank test.* ***Results:*** *Out of 54 respondents, 38 respondents (70.4%) had positive CRP results and 16 respondents (29.6%) were negative. The average leukocyte count of the respondents was 15.8 × 10³/µL. The Spearman Rank test results showed a significance value of p = 0.000 (p < 0.05), proving a statistically significant relationship between CRP levels and leukocyte count.* ***Conclusion:*** *There is a significant relationship between C-Reactive Protein (CRP) and leukocyte count in diabetes mellitus patients at UPTD Puskesmas Sungai Durian.*

Keywords: *Agglutination, C-Reactive Protein, Diabetes Mellitus, Hematology Analyzer, Leukocyte Count.*

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