

ABSTRAK

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KORELASI KADAR LAJU ENDAP DARAH (LED) DAN *HIGH-SENSITIVITY C-REACTIVE PROTEIN* (hs-CRP) DENGAN HbA1c PADA PENDERITA KELOMPOK PROLANIS DIABETES MELITUS

1x + 79 Halaman + 11 Tabel + 3 Gambar + 7 Lampiran

Diabetes Melitus (DM) adalah contoh gangguan metabolik dengan karakteristik hiperglikemia. Resistensi insulin menyebabkan terjadinya hiperglikemia. Kondisi ini menyebabkan radikal bebas dapat terbentuk, sehingga mengakibatkan terjadinya kerusakan sel karena stress oksidatif. Sitokin inflamasi akan diaktifkan pada kondisi ini, sebagai tanda adanya peradangan dalam tubuh. Pemeriksaan Laju Endap Darah (LED) dan *high-sensitivity C-Reactive Protein* (hs-CRP) perlu dilakukan untuk mengidentifikasi peradangan sistematis pada pasien Diabetes Melitus Tipe 2 (DMT2). Kadar gula darah penderita DMT2 dapat diukur menggunakan pemeriksaan *Glycated haemoglobin* (HbA1c). Tujuan penelitian ini adalah untuk mengetahui ada tidaknya korelasi antara LED dan hs-CRP dengan HbA1c pada penderita kelompok prolanis DM. Metode penelitian yang digunakan adalah *Analytical Observational* dengan pendekatan *Cross-Sectional*. Penelitian dilaksanakan pada bulan Desember 2023-April 2024 di Laboratorium Medis Farmalab. Jumlah sampel pada penelitian ini sebanyak 35 sampel penderita kelompok prolanis DM Fasilitas Kesehatan Tingkat Pertama Kabupaten Bangkalan yang diperiksa di Farmalab, dengan teknik pengumpulan data *non-probability sampling*. Analisis statistik dilakukan dengan uji korelasi *Spearman*. Berdasarkan hasil penelitian, diketahui persentase kelompok usia tertinggi yaitu Lansia sebanyak 77% (27/35), jenis kelamin tertinggi yaitu perempuan sebanyak 66% (23/35), kadar HbA1c tertinggi yaitu tidak normal sebanyak 100% (35/35), LED tertinggi yaitu tidak normal sebanyak 80% (28/35), dan hs-CRP tertinggi yaitu kategori risiko kardiovaskular sebanyak 43% (15/35). Uji korelasi antara LED dan HbA1c didapatkan hasil signifikan berkorelasi dengan $p=0.019$; $r=0.394$, namun antara hs-CRP dan HbA1c didapatkan hasil tidak signifikan berkorelasi dengan $p=0.351$; $r=0.163$.

Kata Kunci: DMT2, LED, hs-CRP, HbA1c, inflamasi.

ABSTRACT

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THE CORRELATION OF *ERYTHROCYTE SEDIMENTATION RATE* (ESR) AND *HIGH-SENSITIVITY C-REACTIVE PROTEIN* (hs-CRP) WITH HbA1c IN DIABETES MELLITUS PROLANIS GROUP SUFFERERS

1x + 79 Pages + 11 Tables + 3 Pictures + 7 Appendices

Diabetes Mellitus (DM) is an example of metabolic disorders characterized by hyperglycemia. Insulin resistance causes hyperglycemia and the formation of free radicals, which can cause cell damage due to oxidative stress. Inflammatory cytokines will be activated as a sign of inflammation. *Erythrocyte Sedimentation Rate* (ESR) and *high-sensitivity C-Reactive Protein* (hs-CRP) examination needs to be held to identify inflammation in Type 2 Diabetes Mellitus (T2DM) patients. Blood sugar levels of T2DM sufferers can be measured by *Glycated haemoglobin* (HbA1c) examination. This research aims to determine the correlation between ESR and hs-CRP with HbA1c in DM prolanis group sufferers. The research used *Analytical Observational* and *Cross-Sectional* method. The research was held in December 2023-April 2024 at the Farmalab. The number of samples was 35 samples of DM prolanis group sufferers First Level Health Facilities Kabupaten Bangkalan which was examined at the Farmalab, using *non-probability sampling* data collection techniques. Statistical analysis uses the *Spearman* correlation test. Based on the research, the highest percentage of the age group is Lansia as many as 77% (27/35), highest gender was female as many as 66% (23/35), highest HbA1c is abnormal as many as 100% (35/35), highest ESR is abnormal as many as 80% (28/35), and highest hs-CRP is cardiovascular risk category as many as 43% (15/35). The correlation test between ESR and HbA1c showed that there was a correlation with $p=0.019$; $r=0.394$, but there was no correlation between hs-CRP and HbA1c with $p=0.351$; $r=0.163$.

Keywords: T2DM, ESR, hs-CRP, HbA1c, inflammation.