

## INTISARI

### NILAI HEMOGLOBIN TERGLIKASI SEBAGAI FAKTOR RISIKO TERHADAP MORTALITAS PADA PASIEN TERKONFIRMASI COVID-19 DERAJAT SEDANG BERAT YANG DIRAWAT DI RSUP. DR. SARJIDTO

Septrian Warisman Zega<sup>1</sup>, Robikhul Ikhsan<sup>2</sup>, Sumardi<sup>3</sup>

<sup>1</sup> PPDS Penyakit Dalam, <sup>2</sup> Sub-bagian Endokrin, <sup>3</sup> Sub-bagian Paru  
Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan UGM/  
RSUP Dr Sardjito Yogyakarta

**Latar belakang:** *Coronavirus Disease 2019* memiliki tingkat penularan yang tinggi dan risiko mortalitas yang lebih tinggi daripada influenza. Pada beberapa studi, ditemukan bahwa diabetes merupakan salah satu komorbiditas COVID-19 paling umum. Pasien diabetes lebih rentan terhadap infeksi SARS-CoV-2 dengan prognosis lebih buruk. Namun, data penelitian pasien COVID-19 dengan komorbiditas di Indonesia belum ditemukan.

**Tujuan:** Penelitian ini bertujuan untuk mengetahui nilai HbA1c sebagai faktor risiko mortalitas pada pasien COVID-19 di RSUP dr. Sardjito.

**Metode:** Penelitian ini menggunakan metode kasus kontrol. Terdapat 30 kasus meninggal dengan COVID 19 dan 30 kelompok control pasien COVID 19 yang hidup. Parameter yang dinilai adalah nilai HbA1c tiap kelompok, dengan variabel luar meliputi: usia, jenis kelamin, BMI, Hipertensi, Gagal Jantung Kronis, Gagal Ginjal Kronik, Sirosis Hepatis, Dislipidemia dan status merokok.

**Hasil:** Terdapat perbedaan bermakna nilai HbA1c pada kelompok kasus yang meninggal dengan kelompok yang hidup ( $p=0,028$ ; OR 3,5, CI 1,112-11,017). Dari analisis ROC, didapati AUC 0,721, pada *cutoff* 7,5% diperoleh sensitifitas 80%, spesifitas 50%.

**Kesimpulan:** Nilai HbA1c  $>7,5\%$  merupakan faktor risiko terhadap mortalitas pada pasien terkonfirmasi COVID -19

**Kata Kunci:** hemoglobin terглиikasi, HbA1c, mortalitas, COVID-19

## ABSTRACT

### GLYCATED HEMOGLOBIN VALUES AS A RISK FACTOR ON MORTALITY IN CONFIRMED COVID-19 TREATING PATIENTS IN HOSPITAL Dr. SARJITO

Septrian Warisman Zega<sup>1</sup>, Robikhul Ikhsan<sup>2</sup>, Sumardi<sup>3</sup>

<sup>1</sup> Internal medicine resident, <sup>2</sup> endocrine division, <sup>3</sup> Pulmonology division  
Department of Internal Medicine Faculty of Medicine, Public Health, and Nursing Gadjah  
Mada University RSUP Dr. Sardjito Yogyakarta

**Background:** Coronavirus Disease 2019 has a high transmission rate and a higher risk of mortality than influenza. Several studies have found that diabetes is one of the most common co-morbidities of COVID-19. Diabetic patients are more susceptible to SARS-CoV-2 infection and have a worse prognosis. However, research data on COVID-19 patients with comorbidities in Indonesia has not been found.

**Purpose:** This study aims to determine the value of HbA1c as a risk factor for mortality in COVID-19 patients at RSUP Dr. Sardjito.

**Methods:** This study uses a case-control method. There were 30 cases of death with COVID-19 and 30 control groups of surviving COVID-19 patients. The parameters assessed were HbA1c values for each group, with external variables including age, gender, BMI, hypertension, Chronic Heart Failure, Chronic Renal Failure, Hepatic Cirrhosis, dyslipidemia, and smoking status.

**Results:** There was a significant difference in HbA1c values between the group of cases that died and the group that lived ( $p = 0.028$ ; OR 3.5, CI 1.112-11.017). From the ROC analysis, the AUC was found to be 0.721 at a cutoff of 7.5%, a sensitivity of 80%, and a specificity of 50% was obtained.

**Conclusion:** HbA1c levels  $>7.5\%$  are a risk factor for mortality in patients with confirmed COVID-19

**Keywords:** glycated hemoglobin, HbA1c, mortality, COVID-19