

EFEKTIVITAS METFORMIN TERHADAP PENURUNAN MORTALITAS PASIEN COVID-19 DENGAN KOMORBID DIABETES MELITUS TIPE 2 DI RSUP FATMAWATI TAHUN 2020 – 2021

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Abstrak

COVID-19 (*coronavirus disease 2019*) disebabkan oleh infeksi virus SARS-CoV-2. Pasien COVID-19 yang memiliki diabetes melitus tipe 2 memiliki risiko kematian yang lebih tinggi dibandingkan pasien yang tidak memiliki komorbid. Pasien dengan diabetes melitus tipe 2 mengalami keadaan hiperglikemia. Umumnya penderita diabetes menerima metformin sebagai salah satu penatalaksanaan lini pertama. Namun, perlu dilakukan penelitian lebih lanjut untuk mengetahui efektivitas metformin dalam mengurangi mortalitas pasien COVID-19 yang memiliki diabetes melitus tipe 2. Tujuan penelitian adalah mencari efektivitas metformin terhadap penurunan mortalitas pasien COVID-19 dengan diabetes melitus tipe 2 di RSUP Fatmawati tahun 2020 – 2021. Penelitian ini menggunakan desain observasional analitik dengan metode kohort retrospektif. Rekaman medis pasien COVID-19 yang memiliki diabetes melitus tipe 2 di RSUP Fatmawati tahun 2020–2021 digunakan sebagai subjek penelitian. Teknik pengambilan sampel *purposive sampling* digunakan dan data dianalisis menggunakan uji *Chi Square*. Hasil penelitian mendapatkan 137 sampel pasien (56 menerima metformin, 81 tidak menerima metformin). Mortalitas sampel yang menerima metformin berjumlah lebih kecil (19,6%) dibanding yang tidak menerima metformin (38,3%). Uji *Chi Square* menunjukkan hasil $p\text{-value} < 0,05$ ($p = 0,020$) dengan $risk\ ratio < 1,000$ ($RR = 0,513$), menunjukkan bahwa terdapat hubungan antara pemberian metformin dengan penurunan mortalitas pasien COVID-19 dengan diabetes melitus tipe 2. Penelitian ini menyimpulkan bahwa pemberian metformin memiliki hubungan yang signifikan terhadap penurunan mortalitas pasien COVID-19 dengan komorbid diabetes melitus tipe 2 di RSUP Fatmawati.

Kata kunci: COVID-19, Diabetes Melitus Tipe 2, Komorbiditas, Metformin, Mortalitas

METFORMIN EFFECTIVENESS IN REDUCING MORTALITY OF COVID-19 PATIENTS WITH TYPE 2 DIABETES MELLITUS IN RSUP FATMAWATI IN 2020 – 2021

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Abstract

COVID-19 (coronavirus disease 2019) is an infectious disease caused by the SARS-CoV-2 virus and was first identified in Wuhan, China. Compared to COVID-19 patients without comorbidity, COVID-19 patients with type 2 diabetes (T2DM) have a higher mortality rate. T2DM is a metabolic disease where the body experience glucose elevation. T2DM patients usually receive metformin as first-line treatment. However, metformin efficacy in reducing patients' mortality rate still needs further analysis. This study's objective was to analyze metformin effectiveness in reducing COVID-19 patients with T2DM mortality rate in Fatmawati General Hospital in 2020 – 2021. An analytic observational design with a retrospective cohort approach was used. Samples were acquired from hospitalized COVID-19 patients with T2DM medical records in Fatmawati General Hospital in 2020 – 2021, gathered using a purposive sampling technique, and analyzed using Chi Square test. A total of 137 samples (56 received metformin, 81 did not receive metformin) were included in this study. Mortality in samples that received metformin (19,6%) was lower than those that did not (38,3%). Chi Square test showed a p-value < 0,05 ($p = 0,020$) with a risk ratio < 1,000 (risk ratio = 0,513), showing a relation between metformin treatment and lower mortality rate in COVID-19 patients with T2DM. This study concluded that metformin treatment was significantly related to a lower mortality rate in COVID-19 patients with T2DM in Fatmawati General Hospital.

Keywords: *Comorbidity, COVID-19, Metformin, Mortality, Type 2 Diabetes Mellitus (T2DM)*