

# Perbandingan Karakteristik dan Luaran Ketoasidosis Diabetik (Kad) Sebelum dan Selama Pandemi Covid-19 Di RSCM = Comparison of Characteristics and Outcomes of Diabetic Ketoacidosis (KAD) Before and During the Covid-19 Pandemic at RSCM

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## Abstrak

Latar belakang: Pandemi COVID-19, selanjutnya disebut pandemi, menyebabkan keterbatasan akses ke fasilitas pelayanan kesehatan yang dapat menyebabkan hiperglikemia tidak terkontrol dan Ketoasidosis Diabetikum (KAD). Studi ini bertujuan untuk mengetahui perbedaan angka kejadian, karakteristik dan luaran pasien KAD sebelum dan selama pandemi.

Metode: Penelitian ini merupakan studi analitik kohort retrospektif dengan subjek pasien KAD di RSCM yang datang pada bulan April 2018 – April 2020 (kelompok sebelum pandemi) dan April 2020 – April 2022 (kelompok selama pandemi). Angka kejadian, karakteristik dan luaran pasien diambil dari rekam medis. Studi analitik akan dilakukan menggunakan uji Chi square dan Mann Whitney.

Hasil: Sebanyak 354 pasien diikutsertakan dalam penelitian. Angka kejadian KAD meningkat sebelum dan selama pandemi (IRR: 2,13; p: 0,027). Sebagian besar pasien merupakan laki-laki (57,06%) berusia <65 tahun (76,27%) dengan riwayat Diabetes Melitus/ DM (91,81%). Selama masa pandemi, jumlah pasien yang baru terdiagnosis DM dan mengalami KAD lebih tinggi dibandingkan sebelum pandemi (10,98% vs 1,01%). Pasien dengan DM yang telah terdiagnosis (RR: 1,38 95% CI: 1,251-1,526; p <0,001) memiliki risiko yang secara signifikan lebih tinggi mengalami KAD selama pandemi dengan pencetus berupa pneumonia (RR: 1,25 95% CI: 1,08-2,11; p: 0,002). Selama pandemi, mortalitas (RR: 1,23 95% CI: 1,087-1,389; p: 0,001) dan tingkat keparahan KAD secara signifikan meningkat menjadi sedang-berat (RR: 1,3 95% CI: 1,021-1,353; p:0,014).

Kesimpulan: Selama masa pandemi COVID-19, terdapat peningkatan jumlah pasien dan angka mortalitas KAD. Terdapat perbedaan karakteristik dan perburukan gambaran KAD selama pandemi COVID-19. Gambaran klinis harus diutamakan dalam tatalaksana pasien.

.....Background: The COVID-19 pandemic, hereinafter referred to as a pandemic, causes limited access to health care facilities which leads to uncontrolled hyperglycemia and diabetic ketoacidosis (DKA). This study aims to determine the differences in the incidence, characteristics and outcomes of DKA patients before and during the pandemic.

Methods: This study was a retrospective analytic cohort study comparing the DKA patients presented in April 2018 – April 2020 (as pre-pandemic group) and April 2020 – April 2022 (as during the pandemic group). Incidence rates, characteristics and outcomes were taken from medical records. An analytical study will be carried out using the Chi square and Mann Whitney tests.

Results: A total of 354 patients were included in the study. The incidence of DKA increased during the pandemic (IRR: 2.13; p: 0.027). Most of the patients were male (57.06%) aged <65 years (76.27%) with pre-existing Diabetes Mellitus/DM (91.81%). Newly diagnosed DM proportion was higher in the during pandemic group (10.98% vs 1.01%). Based on the analysis, patients with pre-existing DM (RR: 1.38 95% CI: 1.251-1.526; p <0.001) had a significantly higher risk of experiencing DKA during a pandemic with pneumonia as a precipitating factor (RR: 1.25 95% CI: 1.08-2.11;p: 0.002). During the pandemic, mortality significantly increased (RR: 1.23 95% CI: 1.087-1.389; p: 0.001). DKA severity significantly worsened to moderate-severe (RR: 1.3 95% CI: 1.021-1.353; p:0.014).

Conclusion: During the COVID-19 pandemic, there was an increase of DKA incidence and mortality rate. Different characteristics and worsening features of DKA were found during the pandemic. Clinical features should be prioritized in patient management.