

Hubungan Parameter Glikemik saat Admisi dengan Luaran Perawatan yang Buruk pada Pasien Terkonfirmasi COVID-19 = Association of Admission Glycemic Parameters with Poor Outcomes in COVID-19 Patients

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Abstrak

Latar Belakang. Hiperglikemia merupakan salah satu faktor prognostik buruk pada pasien COVID-19, tanpa memandang riwayat diabetes. Sampai saat ini belum ada penelitian kohort prospektif mengenai hubungan keduanya. Glycemic gap dan SHR merupakan penanda hiperglikemia yang penting karena dapat membedakan kondisi hiperglikemia akut dibandingkan GDP dan GDS. Kedua variabel tersebut belum pernah diteliti secara langsung pada pasien COVID-19.

Tujuan. Mengetahui gambaran parameter glikemik (GDS, GDP, glycemic gap, dan SHR) saat admisi pada pasien COVID-19 serta hubungannya dengan luaran yang buruk dalam perawatan. Metode. Penelitian ini merupakan kohort prospektif dari 291 pasien COVID-19 ringan- sedang di RSUPN Cipto Mangunkusumo rawat inap sejak Desember 2020 hingga Maret 2021. Pasien dilakukan pemeriksaan parameter glikemik saat admisi. Dilakukan analisis cox regression untuk menilai hubungan parameter glikemik saat admisi dengan luaran buruk berupa composite outcome.

Hasil. Pada penelitian ini didapatkan proporsi hiperglikemia berdasarkan GDS 27,8%, GDP 61,9%, glycemic gap 10,6%, SHR 21,3%. Terdapat tiga variabel yang memiliki hubungan secara statistik bermakna dengan luaran buruk pada pasien COVID-19, yaitu GDS (adjusted HR 3,33 [IK95% 1,17-9,46]), glycemic gap (adjusted HR 2,76 [IK95% 1,10-6,94]), dan SHR (adjusted HR 3,11 [IK95% 1,37-7,06]). GDP tidak menunjukkan hubungan yang bermakna dengan luaran yang buruk pada pasien COVID-19. Kesimpulan. Kurang dari setengah total subjek mengalami hiperglikemia berdasarkan GDS, glycemic gap, dan SHR, Lebih dari setengah subjek mengalami hiperglikemia berdasarkan GDP. GDS, glycemic gap, dan SHR memiliki hubungan dengan luaran yang buruk dalam perawatan pada pasien COVID-19.

.....Background. RBG and FBG are poor prognostic factors in COVID-19 patients, regardless of diabetes history. To date, there has been no prospective cohort study on the association between these two parameters with outcome of COVID-19 patients. Glycemic gap and SHR are important markers of hyperglycemia since they can differentiate acute hyperglycemic conditions. These two variables have never been studied in COVID-19 patients. Objective. This study aims to describe admission glycemic parameters (RBG, FBG, glycemic gap, and SHR) in COVID-19 patients and their association with poor outcomes during hospitalization.

Method. This is a prospective cohort study of 291 mild-moderate COVID-19 patients at Cipto Mangunkusumo General Hospital who were hospitalized from December 2020 to March 2021. Patients were examined for glycemic parameters at admission. Cox regression analysis was performed to assess the association between glycemic parameters during admission and poor outcomes as composite outcome.

Results. Proportion of admission hyperglycemia according to RBG, FBG, glycemic gap, and SHR were 27,8%, 61,9%, 10,6%, and 21,3% respectively. Three variables were significantly associated with poor outcomes in COVID-19 patients, they were RBG (adjusted HR 3.33 [95% CI 1.17-9.46]), glycemic gap

(adjusted HR 2.76 [CI 95% 1.10- 6.94]), and SHR (adjusted HR 3.11 [95% CI 1.37-7.06]). FBG was not significantly associated with poor outcomes in COVID-19 patients. Conclusion. Less than half of the total subjects experienced hyperglycemia based on RBG, glycemic gap, and SHR, while more than half of the subjects experienced hyperglycemia based on FBG. RBG, glycemic gap, and SHR were significantly associated with composite outcomes.