

Hubungan profil koagulasi dengan mortalitas 30 hari pada pasien COVID-19: studi terhadap kadar trombosit, PT/APTT, fibrinogen, dan d-Dimer = The correlation of coagulation profile and 30-days mortality in COVID-19: a study towards thrombocyte, PT/APTT, fibrinogen, and d-Dimer level

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Abstrak

Latar belakang. Coronavirus disease-2019 (COVID-19) memiliki spektrum penyakit yang sangat luas dari gejala ringan sampai berat, hingga kematian. Reaksi inflamasi berat akibat dari COVID-19 ini menimbulkan gangguan hemostasis yang disebut dengan COVID-19 associated coagulopathy. Penelitian ini bertujuan untuk menilai profil koagulasi pada pasien dalam pemantauan (PDP) ataupun terkonfirmasi COVID-19 serta hubungannya terhadap mortalitas 30-hari pasien.

Metode. Studi ini merupakan studi kohort retrospektif di RS Cipto Mangunkusumo (RSCM) selama Maret 2020 hingga Juni 2020. Sebanyak 106 subjek yang sesuai kriteria inklusi dianalisis dari data rekam medis. Dilakukan pengambilan data berupa data demografik, klinis atau hemodinamik pasien, profil koagulasi saat subjek ditentukan sebagai PDP atau terkonfirmasi COVID-19, pemberian terapi tromboprolifaksis heparin, dan status mortalitas 30 hari setelah admisi. Perhitungan statistik dilakukan dengan menggunakan Statistical Package of Social Science (SPSS) versi 24.0. Profil koagulasi subjek penyintas 30 hari dibandingkan dengan subjek yang mengalami mortalitas. Variabel profil koagulasi yang bermakna kemudian dianalisis dengan analisis bivariat dan regresi logistik multivariat.

Hasil. Pada kelompok yang mengalami mortalitas 30-hari ditemukan adanya peningkatan jumlah leukosit ($p: 0,022$), penurunan kadar trombosit ($p: 0,016$), dan waktu protrombin (PT) dan waktu activated partial thromboplastin time (APTT) yang lebih panjang ($p: 0,002$ dan $p: 0,018$) dibandingkan pada kelompok penyintas 30-hari. Tidak ditemukan perbedaan fibrinogen dan d-Dimer yang bermakna secara statistik. PT merupakan suatu profil koagulasi tunggal yang dapat digunakan sebagai prediktor mortalitas 30-hari dengan odds ratio (95% CI) sebesar 1,407 (1,072 – 1,846), nilai $p: 0,014$.

Simpulan. Terdapat hubungan antara faktor koagulasi pasien COVID-19 dengan mortalitas 30 hari di RSCM, khususnya PT yang dapat digunakan sebagai prediktor mortalitas 30-hari.

.....Background. Coronavirus disease-2019 (COVID-19) has a very broad spectrum of disease from mild to severe symptoms, to death. The severe inflammatory reaction as a result of COVID-19 infection causes a hemostasis disorder called COVID-19 associated coagulopathy. This study aims to assess the coagulation profile of patients under monitoring (PDP) or confirmed COVID-19 and its relationship with 30-day mortality.

Method. This retrospective cohort study was conducted at RS Cipto Mangunkusumo (RSCM) from March 2020 to June 2020. A total of 106 subjects who met the inclusion criteria were analyzed from medical record data. Data were collected in the form of patient demographic, clinical or hemodynamic data, coagulation profile when the subject was determined as PDP or confirmed as COVID-19, administration of heparin thromboprophylaxis therapy, and mortality status 30 days after admission. Statistical calculations were performed using the Statistical Package of Social Science (SPSS) version 24.0. We compared the

coagulation profiles of the survivor group in contrast to the non-survivor group. Significant coagulation profile variables were analyzed using bivariate analysis and multivariate logistic regression.

Results. There was elevated number of leukocytes (p: 0.022), reduced platelet levels (p: 0.016), and longer prothrombin time (PT) as well as activated partial thromboplastin time (APTT) (p: 0.002 and p: 0.018, consecutively) in non-survivor group. There were no statistical differences in fibrinogen and d-Dimer levels in both groups. Additionally, PT is a single coagulation profile which predicted 30-day mortality with an odds ratio (95% CI) of 1.407 (1.072 - 1.846), and p value: 0.014.

Conclusion. This present study shows abnormal coagulation results are associated with 30-day mortality in COVID-19 patients at RSCM. Prolonged PT was an independent predictor for 30-day mortality in COVID-19 patients