

Hubungan gambaran radiologis high resolution computed tomography (HRCT) pada pasien paru pascaCOVID-19 dengan derajat beratnya pneumonia COVID-19 = Correlation of radiological appearances high resolution computed tomography (HRCT) with COVID-19 severity in post-COVID-19 patients

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Abstrak

Latar Belakang : Berdasarkan onset gejala, efek jangka panjang dari pascaCOVID-19 disebut long COVID. Long COVID berlangsung dari pekan keempat sampai lebih dari dua belas pekan paascaonset gejala. Selain gejala sisa COVID-19, hal yang harus dievaluasi adalah gambaran lesi paru sebagai sekuele pascaCOVID-19. Sekuele paru pascaCOVID-19 dievaluasi dengan high resolution computed tomography (HRCT). Sekuele paru pascaCOVID-19 yang dapat timbul adalah ground glass opacity dan gambaran fibrosis. Selain derajat berat COVID-19, banyak faktor yang memengaruhi terjadinya sekuele paru pascaCOVID-19. Penelitian ini bertujuan untuk mengetahui seberapa besar kekerapan terjadinya sekuele paru pascaCOVID-19 dan faktor-faktor yang memengaruhinya. Metode : Penelitian ini merupakan penelitian observasional analitik dengan pendekatan kohort yang dilakukan bulan Juni 2020 hingga Juli 2021. Subjek penelitian adalah pasien pascaCOVID-19 yang melakukan HRCT toraks pada pekan keempat hingga keduabelas dari onset gejala dengan hasil PCR usap tenggorok minimal satu kali negatif. Subjek penelitian dipilih sesuai kriteria inklusi dan eksklusi. Pengambilan data melalui data sekunder berupa data rekam medis dan hasil HRCT pasien yang kontrol di poli pascaCOVID RSUP Persahabatan. Hasil: Pada penelitian ini didapatkan total 81 subjek dengan pasien yang memiliki sekuele pascaCOVID-19 ada sebanyak 64 pasien dan yang tidak mengalami sekuele sebanyak 17 orang. Kelompok pasien yang mengalami sekuele paru pascaCOVID-19 paling banyak ada pada kelompok 40-59 tahun sebanyak 34 dari 41 pasien. Pada penelitian ini pasien laki-laki memiliki hubungan dengan terjadinya sekuele pascaCOVID-19 ($p=0,002$). Komorbid paling banyak dijumpai pada penelitian ini adalah hipertensi (54,3) dan DM tipe II (23,4%). Derajat COVID-19 berat kritis berhubungan terhadap terjadinya sekuele paru pascaCOVID-19 (nilai p 0,003). Kejadian ARDS juga memiliki hubungan dengan terjadinya sekuele paru pascaCOVID-19 ($p=0,007$). Pemakaian oksigen (O_2) meliputi fraksi ($p= 0,005$) dan durasi ($p= 0,006$) juga memiliki hubungan yang bermakna dengan terjadinya sekuele paru pascaCOVID-19. Hasil analisis multivariat mendapatkan jenis kelamin dan derajat berat merupakan faktor-faktor yang memengaruhi sekuele paru pasca-COVID-19. Background: The long-term effects of post-COVID-19 are known as long COVID based on the onset of symptoms. Long COVID lasts from the fourth week to more than twelve weeks after the onset of symptoms. In addition to the sequelae of COVID-19, what must be evaluated is the appearance of lung lesions as a sequelae after COVID-19. Post-COVID19 pulmonay sequelae was evaluated by high-resolution computed tomography (HRCT) as ground glass opacity and fibrosis. Beside COVID-19 severity, a variety of other factors have a role in the development of post-COVID-19 pulmonary sequelae. The purpose of this study is to determine the frequency of post-COVID-19 pulmonary sequelae and their influencing factors.

Methods: This study was an analytic observational study with a cohort approach that was conducted from

June 2020 to July 2021. The subjects were post-COVID-19 patients who underwent thoracic HRCT in the fourth to twelfth week of symptom onset with a negative throat swab PCR result at least once. The inclusion and exclusion criteria were used to determine which subjects will be included in the study. Data collection through secondary data form medical record and HRCT results of patients controlled at the post-COVID polyclinic at Persahabatan Hospital.

Results: In this study, there were 64 patients who had post-COVID-19 sequelae and 17 patients who did not. There was a total of 81 subjects. The group of patients who experienced post-COVID-19 pulmonary sequelae was mostly in the 40-59 years group with 34 out of 41 patients. In this study, male patients had an association with post-COVID-19 sequelae ($p=0.002$). The most common comorbidities found in this study were hypertension (54.3) and type II DM (23.4%). The degree of critically severe COVID-19 is related to the occurrence of post-COVID-19 pulmonary sequelae ($p=0.003$). The incidence of ARDS also has a relationship with the occurrence of post-COVID-19 pulmonary sequelae ($p=0.007$). Oxygen consumption including fraction of inspired oxygen ($p=0.005$) and duration ($p=0.006$) also has a significant relationship with the occurrence of post-COVID-19 pulmonary sequelae. The results of the multivariate analysis found that gender and severity were factors that influenced post-COVID-19 pulmonary sequelae.