

INTISARI

PERBEDAAN KADAR SITOKIN PRO-INFLAMASI ANTARA PASIEN COVID-19 DEPRESI DENGAN NON-DEPRESI

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Latar belakang: COVID-19 berkaitan dengan adanya disregulasi sistem kekebalan tubuh dan badai sitokin, yang dapat menyebabkan terjadinya kerusakan jaringan lokal hingga sistemik. Mortalitas dan tingkat keparahan COVID-19 diduga berhubungan dengan respons inflamasi berlebih terhadap infeksi SARS-CoV-2. Peningkatan produksi sitokin bersamaan dengan infiltrasi sel mononuklear memperberat inflamasi sistemik yang dapat menyebabkan kondisi pasien jatuh ke dalam badai sitokin dan luaran lain yang tidak diharapkan, seperti kerusakan dan fibrosis alveolar difus, gagal pernapasan progresif, dan gagal organ.

Tujuan: Penelitian ini bertujuan untuk mengetahui perbedaan kadar sitokin pro-inflamasi antara pasien COVID-19 depresi dengan non-depresi.

Metode: Penelitian ini menggunakan metode Systematic Literature Review (SLR), yaitu suatu desain penelitian yang dilakukan untuk mensintesis bukti – bukti penelitian yang sudah ada secara sistematis dalam hal pencarian artikel penelitian, telaah kritis (critical appraisal) dan sintesis hasil penelitian untuk menjawab suatu pertanyaan.

Hasil: Pencarian sistematis artikel penelitian ini dilakukan pada database elektronik PubMed dan Google Scholar yang dipublikasikan tahun 2020-2023. Pencarian dilakukan secara independen yang mengidentifikasi dan menghapus duplikat, menyaring studi berdasarkan judul/abstrak, dan kemudian meninjau teks lengkap dengan mempertimbangkan kriteria inklusi dan eksklusi berdasarkan kelayakan, maka kami dapatkan 5 studi yang memenuhi kriteria tersebut, dimana studi oleh Iglesias-González merupakan studi dengan sampel terbanyak dan kadar IL-6 dan CRP dievaluasi pada 72 jam setelah admisi. Studi tersebut melaporkan kadar IL-6 lebih tinggi secara signifikan pada pasien dengan depresi dibandingkan pasien tanpa depresi, bahkan setelah dilakukan penyesuaian terhadap faktor perancu berupa usia, jenis kelamin, komorbiditas, indeks massa tubuh, dan riwayat merokok.

Kesimpulan: Sitokin proinflamatori menunjukkan peningkatan pada pasien COVID-19 dengan depresi dibandingkan tanpa depresi. Gejala depresi dapat terjadi selama fase akut penyakit hingga pasca pemulihan COVID-19.

Kata Kunci: Sitokin proinflamasi, Depresi, COVID-19

ABSTRACT

THE DIFFERENCE LEVELS OF PRO-INFLAMMATORY CYTOKINES BETWEEN DEPRESSED COVID-19 PATIENT WITH NON-DEPRESSED COVID-19 PATIENT

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Background: COVID-19 is associated with dysregulation of the immune system and cytokine storms, which can lead to local and systemic tissue damage. Mortality and severity of COVID-19 are believed to be related to an excessive inflammatory response to SARS-CoV-2 infection. Increased cytokine production along with mononuclear cell infiltration exacerbates systemic inflammation, leading to conditions such as cytokine storms and other undesirable outcomes, such as diffuse alveolar damage and fibrosis, progressive respiratory failure, and organ failure.

Objective: This study aims to determine the difference in pro-inflammatory cytokine levels between COVID-19 patients with depression and those without depression.

Method: This study employed the Systematic Literature Review (SLR) method, a research design used to systematically synthesize existing research evidence in terms of research article search, critical appraisal, and synthesis of research findings to answer a specific question.

Results: A systematic search for research articles was conducted on the electronic databases PubMed and Google Scholar published from 2020 to 2023. The search was carried out independently, identifying and removing duplicates, screening studies based on title/abstract, and then reviewing full texts while considering inclusion and exclusion criteria. As a result, five studies that met the criteria were found, with the study by Iglesias-González having the largest sample size, and IL-6 and CRP levels were evaluated 72 hours after admission. This study reported significantly higher IL-6 levels in patients with depression compared to those without depression, even after adjusting for confounding factors such as age, gender, comorbidities, body mass index, and smoking history.

Conclusion: Proinflammatory cytokines show an increase in COVID-19 patients with depression compared to those without depression. Depressive symptoms can occur during both the acute phase of the disease and the post-recovery phase of COVID-19.

Keywords: Proinflammatory cytokines, Depression, COVID-19