

CYTOKINES, CHEMOKINES AND CELLS GROWTH FACTORS IN PATIENTS WITH MILD TO MODERATE SARS-CoV-2 INFECTION: A CASE-CONTROL STUDY

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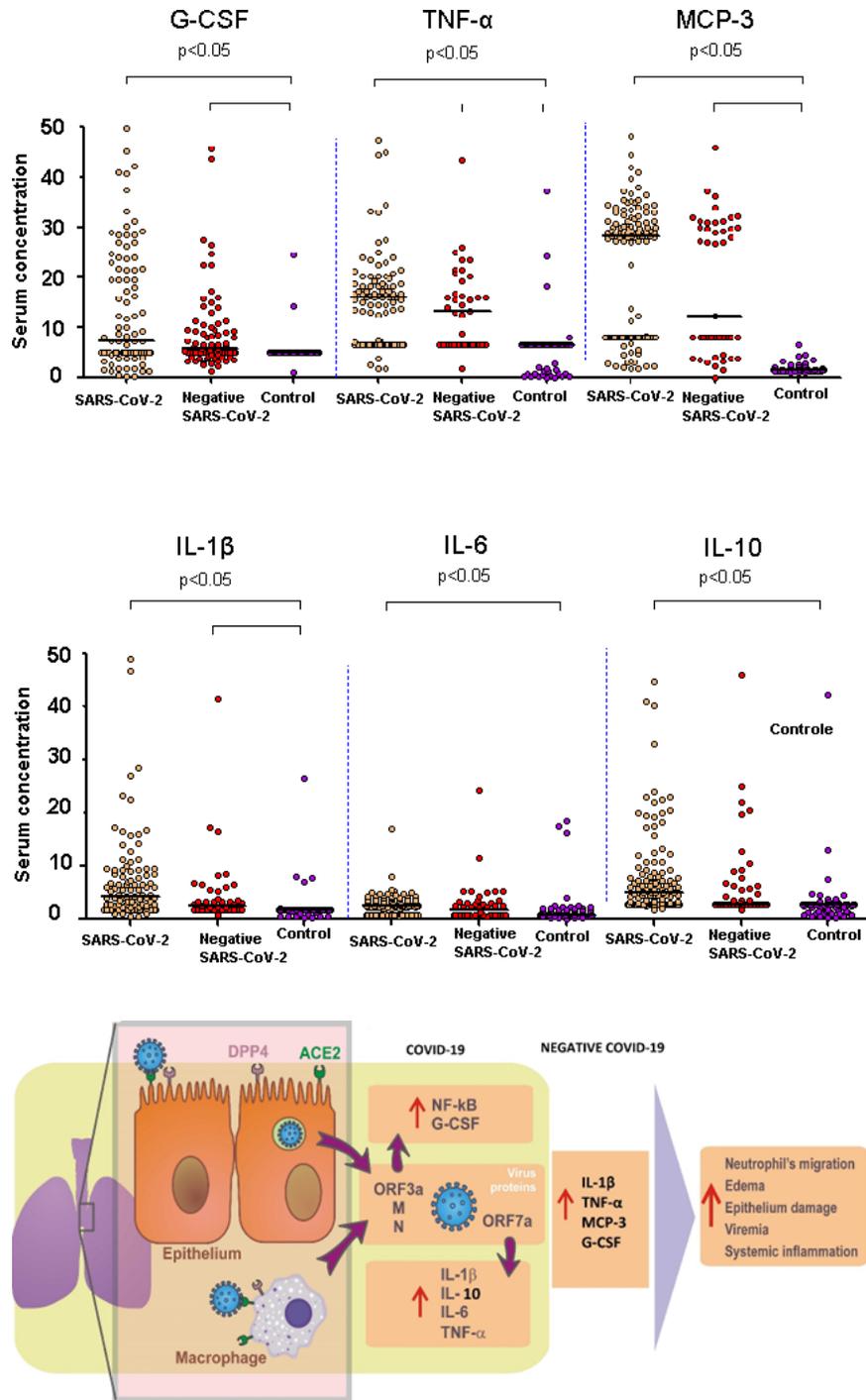
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Abstract

Several biomarkers have been evaluated as predictors of severity or in directing the treatment of COVID-19, however there are no conclusive results with prediction of the pathobiology of the infection. In this study, we evaluated serum levels of cytokines, chemokines, and cell growth factors in association with the pathobiology of mild to moderate SARS-CoV-2 infection. Those markers may act as immuno-inflammatory biomarkers in adults with mild to moderate flu syndrome who sought care at health units. Serum levels of SARS-CoV-2 infected patients (n=113) and flu symptoms individuals negative for SARS-CoV-2 (n=58), tested by the RT-qPCR test - nasal swab were compared to healthy controls (n=53). Participants who were symptomatic but negative for SARS-CoV-2 were tested for Influenza A/B and Respiratory Syncytial Virus (RSV). Results showed that the pro-inflammatory cytokines IL-1 β , MCP-3, TNF- α and G-CSF were increased in symptomatic patients and the cytokines IL-6 and IL-10 were associated with patients positive for SARS-CoV-2 when compared to healthy controls. Symptoms associated with COVID-19 were fever, anosmia, ageusia and myalgia. For patients without SARS-CoV-2 infection their major symptom was sore throat. Five percent (4/83) of SARS-CoV-2 negative patients were positive for RSV. The pathobiology of mild to moderate SARS-CoV-2 infection was associated with increasing pro-inflammatory cytokines and also a pleiotropic IL-6 and anti-inflammatory IL-10 cytokines compared to healthy controls.

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Flow chart for patients and study protocol.pptx available at <https://authorea.com/users/592716/articles/628077-cytokines-chemokines-and-cells-growth-factors-in-patients-with-mild-to-moderate-sars-cov-2-infection-a-case-control-study>

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Table 1 JVM.docx available at <https://authorea.com/users/592716/articles/628077-cytokines-chemokines-and-cells-growth-factors-in-patients-with-mild-to-moderate-sars-cov-2-infection-a-case-control-study>