Plasma levels of il-5, il-12, il-13 and il-23 in Covid-19

Níveis plasmáticos de il-5, il-12, il-13 e il-23 em Covid-19

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ABSTRACT
Cytokines are protein molecules that participate in the body's immune response by stimulating immunogens. This occurs through modulatory signaling of stimulation or inhibition between cells of the innate and adaptive immunity. Studies in the last 3 years indicate that the pathogenicity mechanism of COVID-19 is related to a dysregulation of cytokines and, therefore, to a modification in the inflammatory response of individuals affected by the disease. In this context, this work aims to quantify the cytokines IL-5, IL-12, IL-13 and IL-23 in patients with COVID-19 and associate them with the inflammatory profile. As methodology, we used sandwich immunoenzymatic assays (sandwich ELISA) to determine the serum concentration of cytokines in a group of 11 patients with COVID-19 - diagnosis confirmed by RT-PCR - against a control group matched in terms of age, without any inflammatory comorbidity. The samples were evaluated in duplicate and statistical analyses of the results considered the measures of central tendency with the mean (Md). Thus, we found the results related to the different cytokines: IL-5 (patient =132 pg/mL; control= 51 pg/mL); IL-12 (patient= 126 pg/mL; control= 65 pg/mL); IL-13 (patient= 91 pg/mL; control 52 pg/mL); IL-23 (patient= 100.8 pg/mL; control 53 pg/mL). In view of the above, the participation of the inflammatory response is observed through the profile of cytokines against COVID-19.

Keywords: COVID-19, SARS-CoV-2, Interleukins, Cytokine release syndrome, Cytokines.