

عنوان مقاله:

Association between Atherogenic Index and Cholesterol to HDL Ratio in COVID-19 Patients During the Initial Phase of Infection

محل انتشار:

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خلاصه مقاله:

This case-control study aimed to assess pathologic alteration in the serum levels of the atherogenic index, cholesterol to high-density lipoprotein (HDL) ratio, HDL cholesterol, total cholesterol, triglyceride, HbA1c, and glucose in 158 COVID-19 patients who were hospitalized in Erbil international hospital, Erbil, Iraq, between January and May 2020, in the early stage of infection. The patients were confirmed for SARS-CoV-2 on admission. The laboratory test results were compared between this group and a group of healthy individuals (n=158). A statistically significant difference was found between the studied factors in healthy controls and COVID-19 patients, except for low-density lipoprotein (LDL) cholesterol ($P=0.13$). In the case of COVID-19 patients, total levels of cholesterol and HDL cholesterol were significantly lower than controls ($P<0.003$). Triglyceride, VLDL cholesterol, atherogenic index, and total cholesterol to HDL ratio were found to be significantly higher in COVID-19 patients, compared to controls ($P<0.005$). Atherogenic index were found to be positively correlated with triglyceride ($r=0.88$, $P=0.00$), HbA1C ($r=0.6$, $P=0.005$), and glucose index ($r=0.62$, $P=0.005$), and the ratio of cholesterol to HDL ($r=0.64$, $P=0.004$). In contrast, no correlation was found between atherogenic index and cholesterol to HDL ratio in controls. The results of the current study indicated that risk factors for the cardiovascular disease increased in patients with COVID-19 infection, which included atherogenic index, cholesterol to HDL ratio, as well as the association between atherogenic index, and all were organized in one cluster. Therefore, lipids can perform a vital physiological function in patients infected with COVID-19.

کلمات کلیدی:

covid-19, Atherogenic index, Cholesterol to HDL ratio

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