

عنوان مقاله:

Evaluation of Possible Association between Serum Levels of Aldosterone and Cortisol with Clinical Symptoms Progression in COVID-19 Suspicious Outpatients Tested for SARS-CoV2 RT-PCR: An Analytical Cross-Sectional Study

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خلاصه مقاله:

Aldosterone is a key component of Renin-Angiotensin-Aldosterone System (RAAS). The RAAS could play a substantial role in the pathophysiology of coronavirus disease 2019 (COVID-19). Moreover, the dynamics of the Hypothalamic-Pituitary-Adrenal (HPA) axis may have changed in COVID-19. Cortisol, as an important factor in assessing immune system activity, is an important part of this axis. The present study compared the serum levels of aldosterone and cortisol in COVID-19 outpatients with those of potentially non-infected participants. It was also aimed to assess the possible association between serum levels of aldosterone and cortisol with clinical symptoms progression in COVID-19 outpatients. Demographic characteristics (i.e., gender and age) and clinical data (i.e., oxygen saturation [SPO₂], respiratory rate [RR], and heart rate) were collected. Serum cortisol and aldosterone measurements were conducted using the ELISA technique. Clinical symptoms of the positive polymerase chain reaction (PCR) group were followed up on for 28 days in weekly intervals. SPO₂ was significantly lower in the positive PCR group; however, the RR was significantly higher ($P=0.03$ and $P=0.001$, respectively). Significantly higher levels of aldosterone were found in males of the negative PCR group, compared to females ($P=0.05$). Cortisol ($OR=0.937$, $P=0.033$) and aldosterone ($OR=1.005$, $P=0.020$) levels had a decreasing and increasing effect on the chances of respiratory symptoms occurring over time, respectively. Furthermore, over time, women were twice as likely as men to

develop neurologic symptoms ($OR=0.53$, $P=0.015$). According to the findings of this study, cortisol and aldosterone are associated with the chance of respiratory symptoms occurring over time. However, the levels of these two markers do not seem to be related to the progression of clinical symptoms of lower grades of COVID-19.

کلمات کلیدی:

Aldosterone, Cortisol, Clinical symptoms progression, covid-19

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