

P405 ALDOSTERONE AND INTERLEUKIN-6: IS IT A NEW ASSOCIATION IN COVID-19?

P. Campana, A. Ranieri, C. Basile, I. Forzano, E. Perillo, L. Ciaramella, P. Follero, G. Tagliamonte, G. Sibilio
UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II, NAPOLI; P.O. SANTA MARIA DELLE GRAZIE, POZZUOLI

Introduction: Several pieces of evidence have confirmed the interleukin-6 (IL-6) activity in the cytokine storm induced by COVID-19 pneumonia. Furthermore, the correlation between serum IL-6 levels and plasma aldosterone has been widely ascertained in patients with primary aldosteronism (PA). Hence, the highest levels of aldosterone may increase IL-6 in COVID-19 patients with PA.

Case Presentation: We reported the clinical case of a 47-year-old woman with severe COVID-19 pneumonia complicated by Guillain-Barré Syndrome (GBS). At

admission, the patient presented severe interstitial pneumonia complicated by hypoxemia and respiratory failure, which required mechanical ventilation. Blood tests revealed very high levels of IL-6 (serum IL-6: 402 pg / mL) and its soluble receptor (soluble IL-6 receptor > 1900 pg / mL). In addition, the patient was diagnosed with PA after accidental evidence of right adrenal adenoma, resistant arterial hypertension, severe hypokalemia, and elevated serum levels of aldosterone with a high aldosterone/renin ratio. Therefore, infusion therapy with spironolactone was administered with a rapid improvement of the clinical condition. Later she was diagnosed with acute motor and sensory axonal neuropathy and with the indication of motor rehabilitation.

Conclusions: The higher aldosterone levels in PA could be associated with more severe forms of COVID-19, stimulating the production of IL-6 and its pro-inflammatory effects. Hence, the association between IL-6 and aldosterone may have a synergistic effect in the development of more severe complications such as GBS. The highest aldosterone levels and activity could be also identified in patients with COVID-19 pneumonia and secondary aldosteronism. More studies are needed to evaluate spironolactone therapy in COVID-19.

