8.07 Angiotensin-Converting Enzyme (ACE) And Clinical Outcomes In Long COVID Patients

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While evidence of the association between coronavirus disease 2019 (COVID-19) and the renin-angiotensin system (RAS) is established, the role of serum angiotensin-converting enzyme (s-ACE) remains to be elucidated in long COVID. In this retrospective study, we examined the relationship between s-ACE and clinical outcomes on standardised measures in a sample of long COVID patients (n=75). The medical records of 75 patients who attended a long COVID clinic (at least 12 weeks post infection) during a ten-month period in 2021 were included. Demographic and clinical variables, as well as performance on measures such as the 6-minute walk test (6MWT), pulmonary function tests, the Fatigue Severity Scale (FSS), the Hospital Anxiety and Depression Scale (HADS), St George's Respiratory Questionnaire for COPD (SGRQ-C), the International Physical Activity Questionnaire-Short Form (IPAQ) and the Sniffin Sticks Test-12 Items (SST-12), were recorded. Elevated s-ACE levels were positively correlated with body mass index (BMI; r_s= 0.279) and maximal inspiratory (MIP; r_s= 0.255) and expiratory (MEP; r_s= 0.275) pressures. A negative association was found between s-ACE and time since COVID-19 diagnosis (r_s= -0.258). 21.3% of the sample population had elevated s-ACE (>65 U/L). Pairwise comparisons between patients with elevated and normal ACE levels revealed higher BMI, and shorter diagnosis to assessment interval, in the high ACE group ($p < 0.05$). There was no relationship between s-ACE and any of the standardised scales used. This study is the first to report on s-ACE as a biomarker in long COVID. Further elucidation of this relationship is required and may be additive in informing resource allocation and response to the ever-growing challenge of long COVID.

Conflict of Interest: *None to declare*