

Variation of Biochemical Parameters in Covid-19 Patients Admitted to Colombo South Teaching Hospital, Sri Lanka

SH Wickramaratne^{1#}, NK Samaraweera¹, RD Widanagamage¹, and
WAC Karunarathne¹

¹Faculty of Allied Health Sciences, General Sir John Kotelawela Defence University,
Ratmalana, Sri Lanka

#sasinihw2000@gmail.com

Abstract

Little information is available on the effect of COVID-19 infection on biochemistry of Sri Lankan patients. Owing to this lack of information, prognosis on development of complications were difficult to predict. Hence, this study aimed to investigate the variations of biochemical parameters of infected patients admitted at Colombo South Teaching Hospital from January 2020 to December 2021. This retrospective cross-sectional descriptive study used records of 203 COVID-19 patients, who had been treated for an average of 9 days. Information on age, length of stay, gender, symptoms, previous medical history, results of selected biochemical parameters and pharmacological interventions were collected from medical records. Laboratory tests records were collected which had been done with standard methods and quality controlled by EQA by MRI. The data was analyzed using the SPSS software (student t-test and Pearson correlations). Decreased serum sodium was reported in 150 patients on admission and average urea levels were significantly elevated ($p < 0.05$) from admission to discharge. Decline in eGFR levels ($69.5-93.9 \text{ mL/min/1.73 m}^2$) were observed in 34 out of 51 patients 5 to 7 days after admission. Elevated serum ferritin was observed in 31 out of 35 on admission and elevated ALT values were observed in 51 out of 90 patients on discharge. High AST levels were reported on admission in 71 out of 164 patients. Comparing results with other countries it has been reported decreased sodium levels elevated serum urea, AST, ALT and GGT and serum creatinine levels in patients. Owing to the results, it was concluded that COVID-19 could induce liver and kidney involvements.

Keywords: *COVID-19, SARS-CoV-2, Serum sodium, Ferritin*