

Manipal Academy of Higher Education

Impressions@MAHE

Kasturba Medical College, Mangalore Theses
and Dissertations

MAHE Student Work

Summer 8-1-2021

Comparison of D-dimer level and inflammatory markers in COVID-19 patients with Diabetes Mellitus and without Diabetes Mellitus

Aditi Sharma

Follow this and additional works at: <https://impressions.manipal.edu/kmcmr>



Part of the [Medicine and Health Sciences Commons](#)

Comparison of D-dimer level and inflammatory markers in COVID-19 patients with Diabetes Mellitus and without Diabetes Mellitus

Aditi Sharma, Rukmini M S, Poornima A Manjrekar, Neelam Pawar

Abstract

Aim: The pandemic COVID-19 has affected globally and high prevalence of diabetes mellitus makes it crucial to understand the distinctive inflammatory features of COVID-19 infection in such patients. The high blood glucose levels and diabetes mellitus are independent prognosticators for mortality and morbidity in patients having SARS infection. The present study aims to compare D-dimer and inflammatory markers in COVID-19 patients with and without diabetes mellitus.

Methodology: This was a retrospective study conducted at a tertiary care hospital. We collected the records of D-dimer, serum levels of inflammatory markers IL6, Ferritin, CRP, LDH and HbA1c in COVID-19 patients having T2DM and those without T2DM were compared. D-dimer values were correlated with the IL6, Ferritin, CRP in COVID-19 patients with and without diabetes mellitus and checked for statistical evidence and study the significance. HbA1c levels were checked for the severity of COVID-19. Statistical analysis was done using Mann-Whitney U test and Spearman's correlation.

Results: Serum levels of inflammatory biomarkers of 210 COVID-19 patients were compared in which 107 had T2DM and 103 were non-diabetic. Ferritin and LDH showed statistically significant elevation in diabetic patients. D-dimer showed positive correlation with all the inflammatory markers both in diabetic and non-diabetic COVID-19 patients. HbA1c showed statistically significant positive correlation only with CRP in COVID-19 patients with T2DM.

Conclusion: CRP levels were associated with diabetes. D-dimer, Serum ferritin, and LDH levels were significant in COVID-19 patients having diabetes and those without.

Keywords: COVID-19, Diabetes Mellitus, D-dimer, Interleukin 6, Ferritin, HbA1c, LDH, CRP.