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Evaluation of the Association of D-dimer with Cardiovascular Disease Risk Indices in COVID-19 – A Hospital Based Study

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ABSTRACT

Background: The pandemic of COVID-19 has become a global risk to public health. So, an early and effective set of predictors are necessary to manage the disease.

Objective: The purpose of the study was to evaluate the association of D-dimer with cardiovascular disease risk indices in COVID-19. D-dimer levels and lipid profile of the COVID-19 patients was measured and correlation was studied .

Methods: D- dimer levels and lipid profile was measured in the subjects with covid-19 attending KMC,hospitals and wenlock hospital Mangalore . Blood samples of 100 patients with covid-19 were analysed for D-dimer and lipid indices.

Results: The D-dimer levels in the COVID-19 patients were significantly higher (2.66 ± 2.66 µg/mL) . The median TG levels (156.663 mg/dL) were slightly above the normal range and showed a significant positive correlation (p=0.047) with D-dimer. The TC (r= -0.13, p=0.901), HDL-C (r= -0.053, p=0.603) & LDL-C (r= -0.101, p=0.317) & Non-HDL (r= -0.033, p=0.745) though not statistically significant showed a negative correlation with D-dimer levels. The API (r=0.192, p=0.056) levels shows a statistically significant and positive correlation with the D-dimer levels.

Conclusion: The D-dimer levels of the of COVID-19 patients are higher and there is statistically significant increase in TG and Atherogenic plasma index (API).From the results it is concluded that high API correlates with D-dimer and is related to the severity of disease. Hence, regular check of API levels is helpful in the management of the disease.

Key words ; CoVid 19, lipid indices, D-dimer,API