

## ABSTRACT

COVID-19 the infectious disease caused by the most recently discovered SARS-CoV coronavirus. COVID-19 Patients can show signs ranging from mild to severe on the other hand a large portion of the population being asymptomatic carriers. Symptoms of patient having mild infections are fever, runny nose, fatigue, cough, myalgia, sore throat, sneezing acute upper respiratory tract infection or digestive symptoms (nausea, vomiting, abdominal pain, diarrhea) whereas severe COVID-19 symptoms are Pneumonia with hypoxemia. Acute respiratory distress syndrome (ARDS), encephalopathy may have shock, heart failure, myocardial injury, acute kidney injury, and coagulation. The life cycle of the corona virus with the host involves 5 steps: attachment, penetration, biosynthesis, development and release. People who have medical conditions such as diabetes; liver, lung, and kidney disease; hypertension; cancer patients who are on chemotherapy; transplant recipients; smokers; and patients who are taking steroids regularly are at high risk of COVID-19 infection COVID 19 patients with specific comorbidities included in the study were targeted from Lahore, Punjab, Pakistan. The selected public sector hospitals were Mayo, Shalimar, Ganga raam, Fatima Memorial, Jinnah, Hospital Lahore. A performa was developed for the interview of patient. Demographic characteristics (Age, Gender, symptoms and comorbidities) and clinical parameters (LDH, NEU, CRP, D-Dimer, PT, RBCS) were recorded and written consent was signed by the patients. A total of 40 visits were made in above mentioned hospitals. The current study demonstrated that clinical parameters of COVID-19 patients usually show decrease lymphocyte and neutrophil counts, and elevated serum levels of CRP, PT, D-Dimer, LDH, AST, and ALT). Moreover, it was demonstrated that males were more affected than females similarly older age patients who have comorbidities had high mortality rate. Initial CRP serum levels have been reported to be an independent predictor for the development of severe COVID-19 infection in CVD. Elevated D-Dimer and prothrombin levels has been observed in diabetic patients similarly high CRP level was observed in patients who have hypertension along with COVID.