

## ORIGINAL ARTICLE

**C - Reactive Protein Level as Early Predictor of Covid -19 Patients**MUHAMMAD FAISAL JAVAID<sup>1</sup>, MARIA SARFRAZ<sup>2</sup>, RUBIA AHMAD<sup>3</sup>, SHEHLA FARHIN<sup>4</sup>, ALIA SARFRAZ<sup>5</sup>, SIDRA MUMAL<sup>6</sup><sup>1</sup>Assistant Professor Biochemistry Department Niazi Medical & Dental College Sargodha<sup>2</sup>Associate Professor Biochemistry Department Rawal Institute of Health Sciences Islamabad<sup>3</sup>Senior Registrar Radiology Wah Medical College, Wah Cantt Rawalpindi<sup>4</sup>Assistant Professor Community Medicine Department, Islamabad Medical & Dental College Islamabad<sup>5</sup>Assistant Professor Forensic Medicine Islamabad Medical & Dental College Islamabad<sup>6</sup>Assistant Professor Pharmacology Department Islamic International Medical College Rawalpindi

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**ABSTRACT****Objective:** To assess the C Reactive protein level as early predictor of Covid -19 Patients**Methodology:** COVID-19 patients were admitted in LG Hospital Lahore. The medical history of established patients of COVID-19 during October 2020 to December 2020 was studied. CRP level of Covid -19 patients were measured. Data was collected and entered using software SPSS version which was later analyzed.**Results:** A major rise of CRP levels 20 to 50 mg/L in Covid -19 patients was detected.**Conclusion:** The result of the study shows that rise of CRP level is directly associated with elevation of mortality of Covid -19 ailments.. So, therefore, it is essential to observe CRP level .CRP level should be acclaimed for definite sign for sternness guess of Covid-19 patients.**Keywords:** LG Hospital, Covid-19, Biomarker, CRP**INTRODUCTION**

In Wuhan, China, significant cases of pneumonia were recognized due to unidentified causes were detected during December 2019. The authorized name of this lethal ailments is "COVID-19" by the World Health Organization (WHO).<sup>1-5</sup>.The informal dispersal of the virus, the epidemic blowout in other areas of China as well as in the world.<sup>6</sup> COVID-19 ailments has been established in the international worry as major health crisis. The more indulgent of the ailments & knowledge in the analysis, treatment of COVID-19, and inflammatory changes in the lungs were established as the main sign for COVID-19.<sup>7</sup> CRP measure to reconnoiter a appropriate, effective, and applied clinical biomarker that can estimate sternness of COVID-19 in the initial stage.

**METHODOLOGY**

COVID-19 patients were admitted in LG Hospital Lahore. The medical history of established patients of COVID-19 during October 2020 to December 2020 was studied. CRP level of Covid -19 patients were measured. Data was collected and entered using software SPSS version which was later analyzed.

**RESULTS**

A major rise of CRP levels 20 to 50 mg/L in Covid -19 patients was detected.

Table- I Demography

Variable	Minor Disease	Major Disease	P - Value
N=	75 %	25 %	0.001
Male	62 %	38 %	0.129
Female	45 %	55 %	0.131
Smoker	17 %	10 %	0.172
Complications	30 %	70 %	0.001

The result of the study shows, 75 % patients were of slight disease has less increase in CRP level and 25 %

patients having severe disease have more increase of CRP level.

Smoking has not important effect on harshness of the disease. Extra impediments in disease were observed. (Tables I, II, III).

Table- II CRP Level

Variable	Minor Disease	Major Disease	P - Value
N=	n=250 (71.4%)	n=100 (28.6%)	
CRP	2.65±1.23	4.77±1.23	0.000

Table- III CRP Marker for the forecasting the sternness of COVID-19

Bio Marker	Sensitivity	Specificity	Area Curve	Value
CRP	84%	93%	0.813	6.78

**DISCUSSION**

Covid-19 is epidemic in entire world. It can be an asymptomatic mostly in people that have immunity to this virus.<sup>8</sup> The result of others study shows that increase level of CRP is directly associated with severity and mortality of elder Covid -19 patients than youngster's Covid-19 patients.<sup>9-11</sup>. This recommend that elderly patients be carefully observed and treated more as they are associated with to develop severity of disease.

CRP level was measured in all covid-19 patients regardless the sternness of the ailments. CRP level has been measured previously in patients with severe pneumonia<sup>12-15</sup>.The result advocate that increase in the levels of CRP was related to meager prognosis and amplified hazard of mortality in covid-19 patients. Therefore, it is proposed that active checking of CRP level of serum is of highest prominence to assess the effectiveness and status of the covid-19 patient. CRP level has an advantage of cost-effective and cost efficient. So, CRP levels can simply be endorsed the initial forecasting bio marker of covid-19 for assessment of sternness of the ailments.

## CONCLUSION

The result of study shows that rise of CRP level is directly associated with elevation of mortality of Covid -19 ailments.. So, therefore, it is essential to observe CRP level .CRP level should be acclaimed for definite sign for sternness guess of Covid-19 patients.

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