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To compare inflammatory parameters in coronavirus disease-2019 (COVID-19)-infected pregnant women and age-matched nonpregnant women

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It was a cross-sectional study, and data were collected retrospectively. Pregnant women (cases) with COVID infection admitted to the hospital between July 2020 and December 2020 were included in the study. Age-matched nonpregnant women who were also COVID-positive were taken as controls. Their demographic data, comorbidities, and inflammatory markers were compared. The results were compared using descriptive analysis (clinical profile and outcome of patients). Bivariate analysis was done using Chi-square/Fischer exact test; t-test was used to compare the mean biochemical/pathological parameters between the groups. The clinical outcomes (intensive care unit [ICU] admission, O2 requirement, and mortality) were also noted.

Results: A total of 228 women (116 pregnant and 112 nonpregnant) were enrolled in the study. The average age of cases was 27 years, while that of controls was 29 years. There was no statistically significant difference in the incidence of comorbidities (anemia, hypertension, diabetes mellitus, asthma, and hypothyroidism) between the two groups. Compared to the controls, pregnant women did not have any significant difference in the levels of D-dimer, lactate dehydrogenase, and serum ferritin, but there were significant differences ($p < 0.05$) in the values of total count neutrophils, lymphocytes, interleukin-6, and international normalized ratio. We did not have any mortality in either group, and only one patient from the study group needed ICU admission.

We were able to point out the inflammatory markers that were significantly altered in COVID-positive pregnant women. The markers may help us understand the severity and clinical outcome of the disease better in the future, so that appropriate preventive measures can be taken.

Comparison of inflammatory markers in both groups.

Parameters	Study Group	Control Group	t Value	p value
White Blood Cells	9530.51±2857.25	5949.10±2238.80	9.872	0.002
Neutrophils	72.80±6.95	60.49±11.84	27.453	<0.001
Lymphocytes	21.40±6.46	32.39±10.84	28.691	<0.001
IL-6	7.30±12.40	5.41±5.01	4.116	0.044*
D-Dimer	1.67±1.06	0.65±1.04	2.983	0.085
LDH	224.84±67.97	225.34±51.73	0.151	0.698
Ferritin	63.74±52.24	58.34±63.84	0.649	0.421
INR	1.02±0.05	1.04±0.05	13.396	<0.001

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