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To study duration of viral clearance in covid19 patients: A prospective study from bangalore

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COVID-19 infection, which first reported as a cluster of pneumonia from Wuhan, China, in December 2019, has rapidly emerged as a global pandemic. During the early course of the pandemic. The duration of infectious virus replication is an important factor for clinicians. There is a significant correlation between the duration of SARS-CoV-2 virus clearance and the prognosis of COVID-19

Objectives: To study Duration of viral clearance in COVID 19 patients, admitted in an Indian setting.

Methodology: The prospective study was carried out between March and May 2020 at a Bengaluru-based hospital setting. Approval and clearance were obtained from the institutional ethics committee. The study included patients aged ≥ 18 years of both the gender, diagnosed with COVID-19 infection by RT-PCR technique. The study excluded patients <18 years and those not willing to provide signed informed consent prior to the study. Case record form with follow-up chart was used to record the demographic data, and duration and clinical features of the disease .

Case record form with follow-up chart was used to record the demographic data, and duration and clinical features of the disease. Patients data like clinical symptoms and incidence of co-morbidities like hypertension, diabetes, and metabolic disorders like renal, cardiac and respiratory disorders were collected biochemical reports were collected (CBC, LDH, CRP, FERRITINE and D-DIMER). Based on the number of days required for viral clearance, the subjects were classified as: group 1: ≤ 14 days, group 2: 15-28 days, and group 3: >28 days

Results: The study included 536 patients it was found that mean duration required for viral clearance was around 8.98 ± 3.54 . Mean ages noted for group 1, 2 and 3 (based on viral clearance) were 37.57 ± 13.65 years, 37.12 ± 13.73 years and 49.50 ± 23.56 years respectively. There was a significant difference between mean age of group 1 and 2, as well as group 1 and 3. Moreover, the distribution of patients across different age group was found to be statistically significant ($P < 0.05$). Significant difference was noted between three groups with respect to the comorbidity status ($P < 0.0001$). The COVID-related symptoms dyspnea and cough were more prominent in group 3 ($P < 0.05$). TLC which is statistically significant ($p < 0.05$), lower the TLC more the duration of viral clearance and more the duration of hospital stay

Conclusion: The mean days of viral clearance noted in COVID subjects is around 8.98 ± 3.54 days. There was a significant difference between mean age of group 1 and 2, as well as group 1 and 3. However there is no statistically significant correlation between duration of hospital stay and inflammatory markers except TLC which is stastically significant ($p < 0.05$), lower the TLC more the duration of viral clearance and more the duration of hospital stay.