

# The Behavior of Fever in Patients Diagnosed with SARS-Cov-2 Infection Prior and at Time of Treatment Initiation

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## ABSTRACT

**Background:** The COVID-19 infection may manifest with a range of symptoms, spanning mild or asymptomatic cases to severe illness or fatal outcomes. Typical symptoms include pyrexia, cough, and difficulty breathing. Other possible manifestations consist of fatigue, muscle aches, general discomfort, sore throat, respiratory issues, and inability to perceive smell or taste. Diagnosis of COVID-19 entails the utilization of clinical indicators, computed tomography (CT) scans or chest radiographs, serological assays, and molecular testing, such as RT-PCR to identify the virus's genetic material, by healthcare professionals.

**Objective:** In the present investigation, our aim was to clarify the length of pyrexia, the predominant feature of the illness, and its relation to different patient characteristics.

**Subjects and Methodology:** An investigation (cross-sectional) was carried out in the Province of Al-Diwaniyah, located in Iraq. A total of 99 COVID-19 cases were included in the study, consisting of 49 women and 50 men, spanning from 16 to 81 years of age. The primary variables examined in this research encompassed the patients' gender, age, lymphocyte percentage, count of leukocytes, pulmonary participation evaluated through CT imaging, length of pyrexia upon presentation, duration of fever subsiding after treatment initiation, and the existence of co-morbid conditions such as pulmonary tuberculosis, asthma, essential hypertension, and diabetes mellitus.

**Results:** The average age of total participants was  $50.4 \pm 16.3$  years, with no notable variation in age average between women and men ( $p=0.924$ ). Similarly, there was an absence of significant variation in averages of lymphocyte % and WBC count between the two genders ( $p>0.05$ ). Pulmonary participation, as discerned through CT imaging, varied from 0 to 80%, with a mean of  $26.77 \pm 21.43$  %; notably, there existed no substantial disparity in lung participation between the female and male cohorts ( $p=0.770$ ). The participants' average fever duration upon arrival was  $6.6 \pm 3.6$  days, varying from 1-21 days. The length for high temperature to diminish ranged from 2 to 25 day, and an average of  $5.82 \pm 3.53$  day. There was no significant disparity in duration between women and men ( $p=0.214$ ). The length of fever at presentation, the presence of diabetes mellitus, and the WBC count were all found to have a significant and positive association with the time it took for the fever to subside ( $p<0.05$ ).

**Conclusion:** Prolonged fever following the detection and management of COVID-19 may be anticipated in individuals with elevated WBC count, extended fever duration, and a history of diabetes. Such patients are more likely to face severe consequences and mortality.

**Key words:** Fever, COVID-19, Iraq

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