

The Importance of the Hematologic Tests in Coronavirus Disease 2019 (COVID-19)

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1. Short Commentary

According to the World Health Organization, approximately 2,000,000 COVID-19 positive cases were reported from December to the middle of April [1]. It has been reported that 60% of those affected worldwide are male, the average age is 51 years, and 5% of patients require intensive care units, 2.3% patients require invasive mechanical ventilation, and 1.4% death [2]. It also appears to be frequently affected in hematological parameters. Lymphopenia (<1500 per mm^3) is the most common laboratory finding in COVID-19 and is found in as many as 83% of hospitalized patients, in addition, thrombocytopenia ($<150,000$ per mm^3) in 36.2%, and leukopenia ($<4,000$ per mm^3) in 33.7%. Lymphopenia, neutrophilia, and high ferritin levels (>300 $\mu\text{g/L}$) may be associated with disease severity. It was reported the association between elevated D-dimer (≥ 0.5 mg/liter), lymphopenia and mortality rate [2-4]. In another study, platelet value $<100,000$ per mm^3 , prothrombin time ≥ 16 seconds and D-dimer ≥ 1 mg/liter could show mortality [5]. In this study, fibrinogen levels did not evaluate. Disseminated intravascular coagulation (DIC) is one of the most frequent complications in sepsis and the diagnosis can be made based on specific criteria. Thrombocytopenia without abnormal prothrombin time or D-dimer can be discriminated from DIC. The International Society on Thrombosis and Haemostasis DIC score, use in daily practice, may be valuable in this patient group, especially before overt DIC [6]. A patient with COVID 19 chronic lymphocytic leukemia has been reported among the hematological malignancies [7]. In the case, it was emphasized that incubation was 25 days (longer than 14 days) and showed a moderate clinical course. The condition has been linked to immune suppression, although the lymphocyte count is high [7]. Evaluating the lymphocyte subgroups can contribute to determining the severity of the disease. In the presence of COVID-19 disease, careful monitoring of hematological laboratory parameters can be noticed before developing the sepsis and mortality.

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