

## **Abstract**

**Background:** In December 2019, an unknown viral agent began to spread in Wuhan, China, which is known to cause severe acute respiratory syndrome, and it did not take long for it to spread widely throughout the world. This virus was announced by WHO as the cause of the disease of Covid-19.

**Aim:** Complications caused by hypercoagulation and thrombosis in patients with covid-19 can affect the prognosis of the disease. The aim of this study is to investigate hematological findings in hospitalized patients with covid19 with and without venous thrombosis.

**Materials and methods:** In this cross-sectional and analytical study, 508 patients with covid-19 admitted to Imam Khomeini Hospital in Ardabil were evaluated. The required information including demographic characteristics, previous disease history, clinical information, hospital outcome and necessary laboratory findings were collected by examining the patient files in the hospital archive. The relevant information was entered into the SPSS version 17 software and evaluated based on independent t and the chi-squared test.

**Results:** A total of 508 patients with an average age of 61.26 years (53.9% male) with covid-19, with an average length of hospitalization of 7.88 days, and 17.3% were in critical condition, were evaluated. Thrombotic events were reported in 21.2%. The levels of platelets, leukocytes, lymphocytes and neutrophils were significantly higher in patients with thrombosis. The amount of neutrophil to lymphocyte (NLR) and hemoglobin level were not significantly different in two groups with and without thrombosis (both  $P=0.75$ ). Also, no significant correlation was found between albumin and NLR.

**Conclusion:** Considering high platelet and leukocyte count in covid-19 patients with thrombosis, these laboratory criteria can be a guide for starting anticoagulants with a prophylactic dose in covid-19 patients.

**Keywords:** blood factors, lymphocyte to neutrophil, covid-19, thrombosis