

Evaluation of clinical and laboratory findings in hematological cancers patients with COVID 19 admitted to Ardabil Imam Khomeini hospital from March 2020 to March 2021

Abstract

Background: Considering the pandemic viruses, the role of background diseases in the severity of Covid-19 seems to be significant. One of the fields of diseases in the condition of covid-19 is hematological cancer, which can be investigated for covid-related blood malignancies due to its high risk in patients with medical diseases based on clinical and laboratory findings.

Aim: The present study aims to evaluate clinical and laboratory findings in hematological cancer patients with covid-19 and compare it between recovered and deceased patients in Imam Khomeini Hospital, Ardabil.

Materials and methods: This study is a retrospective cross-sectional study that was conducted from the beginning of March 2017 to the end of March 2017 on all patients with hematological malignancy who were infected with Covid-19 who underwent chemotherapy at Imam Khomeini (RA) Hospital in Ardabil. The criteria for inclusion in the study were all patients with malignancy whose Real Time PCR test was positive for Covid-19 or the diagnosis of Covid-19 was confirmed according to national guidelines based on the findings of Citicine.

It is worth mentioning the demographic characteristics of the patient, including age, gender, height, weight, co-morbidities, drug use, and information about the severity of the disease of Covid-19 (asymptomatic, mild, moderate, severe, very severe), the type of malignancy, the stage of the disease, and chemotherapy. The receipt and interval of chemotherapy and clinical, laboratory and radiological information related to COVID-19 and the clinical course and outcome of COVID-19 in these patients will be collected and analyzed.

Results: In this study, 28 hematological malignancy patients with covid-19 with an average age of 59.89 ± 15.38 years, 13 of whom were male (46.4%) and 15 female (53.6%) were included in the study. The results of the current study revealed that 18 patients (64.3%) recovered and 10 patients (35.7%) died. The most common comorbidities with hematological malignancy patients with covid-19 were respectively hypertension (53.6%), history of

diabetes (28.6%) and history of kidney disease (10.7%). Analysis of the laboratory results based on the outcome of the obvious disease, neutrophil count ($p=0.001$), lymphocyte count ($p<0.05$) and INR ($p<0.05$), Ddimer ($P=0.001$), lactate dehydrogenase ($P<0.001$) Cr, ($p<0.05$) was more and statistically significant in patients with hematological malignancies who died with covid-19 compared to those who recovered. And also by analyzing the percentage and death rate according to the hospitalization service or the severity of the illness of the patients hospitalized in the ICU service ($p=0.000$) it was significant and high.

Conclusion: Changes in inflammatory markers, metabolic and liver disorders, and blood disorders and disease severity in hematological malignancy patients with covid-19 affect the outcome of the disease, which require more attention and treatment measures.

Keywords: Hematologic malignancy / COVID19/ Chemotherapy