Correlation between Myelodysplastic syndrome and COVID-19 infection

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INTRODUCTION

The COVID-19 (SARS-CoV-2) pandemic had a variety of effects on patients with hematological malignancies, including diagnostic and therapeutic delays, a lack of blood supplies, and, most critically, increased risks of morbidity and death from the viral infection itself. COVID-19's effects on numerous particular tumors have already been detailed, however there has been nothing published on its impact on patients with MDS.

AIM

This study was conducted to evaluate the epidemiology of Myelodysplastic Syndrome (MDS) patients with the COVID-19 (SARS-CoV-2), and to estimate the prevalence of disease severity.

METHOD

Design:
The study was a retrospective observational study
Patient and methods:

The study included 88 Myelodysplasia (MDS) patients, collected from all available medical records for patients with myelodysplasia disease who attended the Hematology department between January 2020 and December 2022.

RESULTS

Main Outcomes Measures:

Laboratory-based diagnosis of MDS patients before COVID-19 (i.e., age, sex, bone marrow results, risk stratification, prognostic status of MDS, cytogenetic assessment, type of management). Along with, Evidence of COVID-19 diagnosis: (PCR, Chest X Ray, clinical presentations, type of treatment and vaccination doses, types).

Results :

A high significant association was found between COVID-19 infection and the hematological presentation of the patients ($p < 0.05$). Most of our subjects 34 patients (40.5%) fell under the category of MDS-MLD, a high significance was found between COVID-19 infection and the classification of MDS and the percentage of blast cell in the marrow as well as the degree of dysplasia with a ($p < 0.001$). Positive significance was also reported between COVID-19 infection and the severity of MDS ($p < 0.05$).Regarding cytogenetics, the only relation was found between COVID -19 infection and deletion of chromosome 5 and patients with comlex cytogenetic anomalies with P value <0.01 and 0.03 respectively.

CONCLUSIONS

There was a strong correlation between COVID-19 infection and MDS severity with a high significant association between COVID-19 infection and the hematological presentation , percentage of blast cells and the degree of dysplasia.