Is COVID-19 Infection a Trigger for Progression of CLL?

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Background

COVID-19 diagnosed in chronic lymphocytic leukemia (CLL) could have a severe evolution with many complications. Chemo immunotherapy and immunological status could be the main causes of this evolution.

Objective

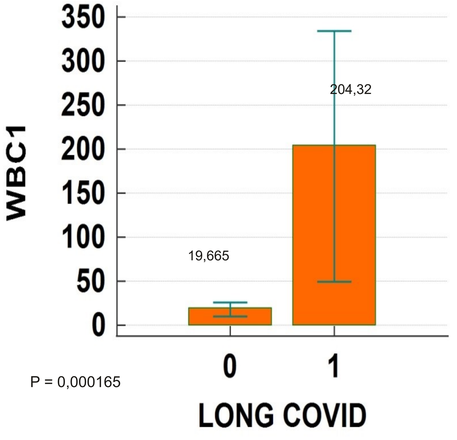
The aim of this study was to check if COVID-19 could associate with a progression of CLL.

Materials & Methods

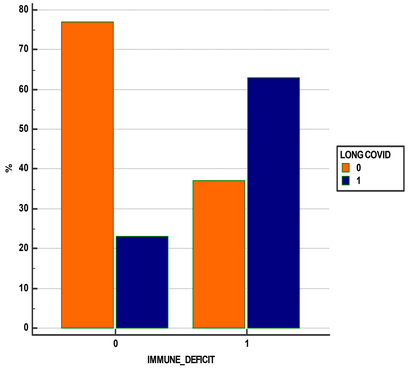
The retrospective study included 40 CLL patients (33 male and 7 female) with a median age of 64.5 (95% CI for median: 59-67) who were admitted to the Hematology Department Colentina between March 2020-March 2022). These patients were diagnosed with COVID-19 by PCR test and were evaluated from 2020 to 2022.

Results

- High count of leucocytes (WBC)- more than 50 x 1000/uL was identified in 15 patients (37.5%).
- Persistence of hyperleukocytosis after 1 month of evolution was identified in 10 patients, in 7 of them starting treatment was needed. All these patients were in the watch and wait group before the onset of COVID-19.
- Infection of SARS-Cov2 diagnosed in CLL patients was associated with refractory status and progression of CLL during the follow-up period, a switch to another line of treatment was needed.
- Long COVID is defined as persistence long time for symptoms and the positivity of the PCR test was directly correlated with an immune deficit (r=0.37, p=0.01).
- Thrombotic complication developed by CLL patients during COVID-19 evolution was associated with vascular risk presence (diabetes mellitus, arterial hypertension, thrombosis history- stroke or myocardial infarction) – (r=0.61, p=0.0001).



P = 0,000165



P = 0,02

- Unfavorable evolution was highly correlated with high severity of pneumonia/respiratory insufficiency and immune deficiency presence; the high count of WBC at the onset or during the first month of COVID-19 was not associated with a high risk of deceased.

Conclusion

COVID-19 could be a trigger for the progression of CLL. A strong analysis of the high cohort is needed. The immune deficit is involved in the severity of COVID-19 and the unfavorable evolution of the patients. Vascular risk presence in CLL patients is associated with thrombotic complication