COVID-19 infection in CLL patients treated with venetoclax: a Danish single-center experience

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INTRODUCTION

Studies have indicated that patients with chronic lymphocytic leukemia (CLL) or small lymphocytic lymphoma (SLL) are in high risk of developing severe COVID-19. In vitro studies have shown that venetoclax blocks the interaction between the ACE-2 receptor and the SARS-CoV-2 spike glycoprotein. However, COVID-19 related morbidity and mortality in patients treated with venetoclax is unknown.

OBJECTIVES

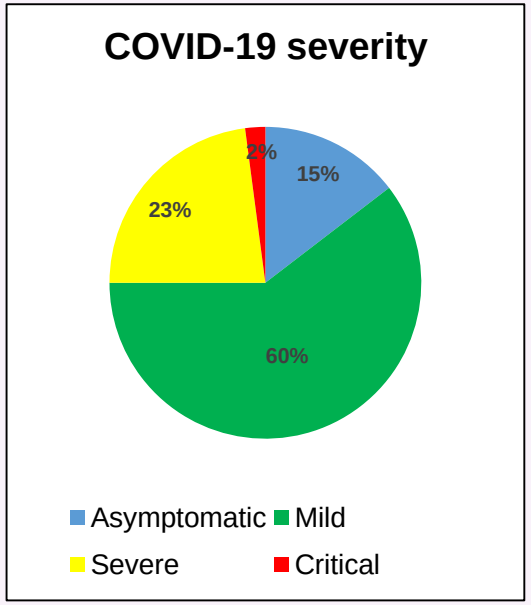
We investigated the impact of venetoclax on COVID-19 mortality and morbidity in patients with CLL/SLL. Primary outcome was 30-day COVID-19 mortality. COVID-19 severity, hospitalization rate and treatment with antiviral drugs were secondary outcomes.

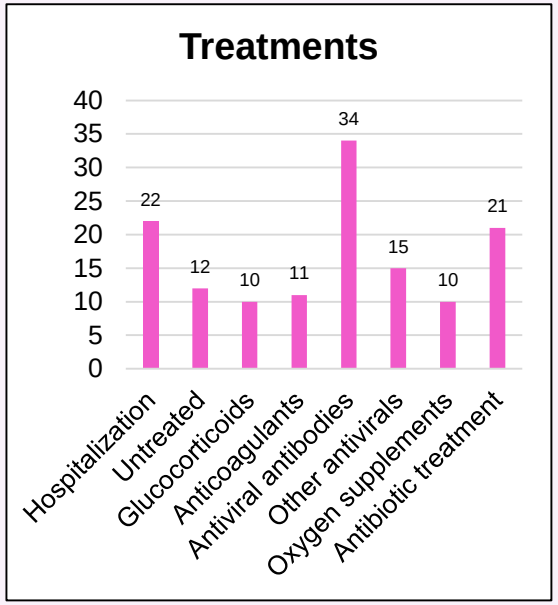
METHODS

- 108 patients treated with venetoclax at Department of Hematology, Zealand University Hospital were included.
- Patients were diagnosed with CLL/SLL between 1996-2022 and treated with venetoclax between April 2017- December 2022.
- 48 patients tested positive for SARS-CoV-2 on a qRT-PCR test.
- All data was collected from electronic records and the nationwide database of PCR results.

RESULTS

- Baseline characteristics were comparable to a general CLL population.
- 75% of the patients presented with asymptomatic/mild COVID-19, 25% presented with severe/critical COVID-19.
- Only 2 patients deceased within 30 days from positive PCR. The primary causes of death was Richter transformation (DLBCL) and pulmonary cancer.
- The hospitalization rate was 46% with no ICU admissions.
- High CIRS-scores were more frequent in patients with severe COVID-19 (P<0.02).
- COVID-19 morbidity and mortality were similar before and during the Omicron era.
- Patients with COVID-19 during ongoing venetoclax treatment received more intensive treatment with antiviral antibodies (P=0.03), anticoagulants (P=0.03), Piperacillin/Tazobactam (P<0.01) and antiviral drugs (P=0.02) than patients with COVID-19 after discontinuation of venetoclax.





CONCLUSION

Our results suggest that CLL/SLL patients treated with venetoclax generally present with mild COVID-19 and low mortality rates compared to data from studies of general CLL populations. COVID-19 morbidity and mortality are highly associated with other comorbidities.

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