**Name of Journal:** *World Journal of Virology*

**Manuscript NO:** 69085

**Manuscript Type:** LETTER TO THE EDITOR

**Effects of COVID-19 in lymphoid malignancies**

Özdemir Ö. COVID-19 in lymphoid malignancies

Öner Özdemir

**Öner Özdemir,** Division of Pediatric Allergy and Immunology, Sakarya University Medical Faculty, Adapazarı 54100, Sakarya, Turkey

**Author contributions:** Öner Özdemir did all the work.

**Corresponding author: Öner Özdemir, MD, Professor,** Division of Pediatric Allergy and Immunology, Sakarya University Medical Faculty, Adnan Menderes Cad., Adapazarı 54100, Sakarya, Turkey. ozdemir\_oner@hotmail.com

**Received:** June 16, 2021

**Revised:** August 4, 2021

**Accepted: November 14, 2021**

**Published online:**

**Abstract**

I will have a couple of comments on the issues elaborated in the article titled as ‘Impact of COVID-19 in patients with lymphoid malignancies’. First, the author did not emphasize and overlook the prolonged persistence of SARS-CoV-2 RNA in COVID-19 patients with hematological malignancies. Second, the rise of a chronic lymphoid leukemia clone in COVID-19 was not mentioned by the authors. Third, achieving a complete remission in asymptomatic COVID-19 patients with follicular lymphoma in partial remission after bendamustine-based therapy is not specific to this lymphoma subtype. Fourth, follicular lymphoma does not always undergo complete remission with SARS-CoV-2 infection. Our aim is to help the authors to discuss and clarify these issues a little more in COVID-19 patients with hematological malignancies.

**Key Words:** COVID-19; Tumor; SARS-CoV-2; Lymphoid malignancy

Özdemir Ö. Effects of COVID-19 in lymphoid malignancies. *World J Virol* 2021; In press

**Core Tip:** I have several comments on the article titled as ‘Impact of COVID-19 in patients with lymphoid malignancies’. The author did not emphasize a couple of issues related to the effects of SARS-CoV-2 infection in various lymphoid malignancies. This letter helps to clarify these issues more in COVID-19 patients with hematological malignancies.

**TO THE EDITOR**

I have read the original article by Riches[1] entitled ‘Impact of COVID-19 in patients with lymphoid malignancies’ with great interest[1].

I will have a couple of comments on the issues elaborated in their article.

First, the author did not emphasize and overlook the prolonged persistence of SARS-CoV-2 RNA in COVID-19 patients with hematological malignancies. The author just slightly touched upon within a sentence consisting of a couple of words (the persistence of a positive polymerase chain reaction for SARS-CoV-2) under the section of ‘Impact of COVID-19 by Lymphoma Subtype’. However, I think that this is a huge and important problem itself and its management needs to be discussed especially in this kind of article. Here, I give some exemplary articles from the recent literature such as in King's College Hospital experience[2], Karataş *et al*[3]’s, and Perini *et al*[4]’s studies.

Second, Largeaud *et al*[5] reported ‘major rise of a chronic lymphoid leukemia clone during the course of COVID-19’. This aspect of CLL and COVID-19 disease should also be discussed by the author.

Third, the author discusses achieving a complete remission in asymptomatic COVID-19 patients with follicular lymphoma in partial remission after bendamustine-based therapy. When we look at the literature, this is not just specific to follicular lymphoma, but other hematological malignancies as well, such as in diffuse large B-cell lymphoma and Hodgkin lymphoma after concurrent other and SARS-CoV-2 infections, respectively[6]. Also, just a perfect article titled as ‘complete remission of follicular lymphoma after SARS-CoV-2 infection: From the "flare phenomenon" to the "abscopal effect"’ is reported by Sollini *et al*[7]. This issue should also further be elucidated.

Fourth, follicular lymphoma does not always undergo complete remission with SARS-CoV-2 infection, reported by Tafti *et al*[8] and Wright *et al*[9]. Indeed, in some malignancy patients, SARS-CoV-2 infection persisted, and COVID-19 pneumonia and the multimicrobial superinfection developed. Even, convalescent plasma needed to be utilized in the patient[9].

The authors did not emphasize a couple of issues related to the effects of SARS-CoV-2 infection in various lymphoid malignancies. Our aim is to help to clarify these issues a little more in COVID-19 patients with hematological malignancies.

**REFERENCES**

1 **Riches JC**. Impact of COVID-19 in patients with lymphoid malignancies. *World J Virol* 2021; **10**: 97-110 [PMID: 34079692 DOI: 10.5501/wjv.v10.i3.97]

2 **Shah V**, Ko Ko T, Zuckerman M, Vidler J, Sharif S, Mehra V, Gandhi S, Kuhnl A, Yallop D, Avenoso D, Rice C, Sanderson R, Sarma A, Marsh J, de Lavallade H, Krishnamurthy P, Patten P, Benjamin R, Potter V, Ceesay MM, Mufti GJ, Norton S, Pagliuca A, Galloway J, Kulasekararaj AG. Poor outcome and prolonged persistence of SARS-CoV-2 RNA in COVID-19 patients with haematological malignancies; King's College Hospital experience. *Br J Haematol* 2020; **190**: e279-e282 [PMID: 32526039 DOI: 10.1111/bjh.16935]

3 **Karataş A**, İnkaya AÇ, Demiroğlu H, Aksu S, Haziyev T, Çınar OE, Alp A, Uzun Ö, Sayınalp N, Göker H. Prolonged viral shedding in a lymphoma patient with COVID-19 infection receiving convalescent plasma. *Transfus Apher Sci* 2020; **59**: 102871 [PMID: 32694044 DOI: 10.1016/j.transci.2020.102871]

4 **Perini GF**, Fischer T, Gaiolla RD, Rocha TB, Bellesso M, Teixeira LLC, Delamain MT, Scheliga AAS, Ribeiro GN, Neto JV, Baiocchi OCCG, Abdo ANR, Arrais-Rodrigues C, Fogliatto LM, Bigni RS, Schaffel R, Biasoli I, Pereira J, Nabhan SK, Souza CA, Chiattone CS; Associação Brasileira de Hematologia, Hemoterapia e Terapia Celular (ABHH). How to manage lymphoid malignancies during novel 2019 coronavirus (CoVid-19) outbreak: a Brazilian task force recommendation. *Hematol Transfus Cell Ther* 2020; **42**: 103-110 [PMID: 32313873 DOI: 10.1016/j.htct.2020.04.002]

5 **Largeaud L**, Ribes A, Dubois-Galopin F, Mémier V, Rolland Y, Gaudin C, Rousset D, Geeraerts T, Noel-Savina E, Rieu JB, Vergez F. Major rise of a chronic lymphoid leukemia clone during the course of COVID-19. *Int J Lab Hematol* 2021; **43**: e82-e83 [PMID: 33161639 DOI: 10.1111/ijlh.13383]

6 **Buckner TW**, Dunphy C, Fedoriw YD, van Deventer HW, Foster MC, Richards KL, Park SI. Complete spontaneous remission of diffuse large B-cell lymphoma of the maxillary sinus after concurrent infections. *Clin Lymphoma Myeloma Leuk* 2012; **12**: 455-458 [PMID: 23025990 DOI: 10.1016/j.clml.2012.06.007]

7 **Sollini M**, Gelardi F, Carlo-Stella C, Chiti A. Complete remission of follicular lymphoma after SARS-CoV-2 infection: from the "flare phenomenon" to the "abscopal effect". *Eur J Nucl Med Mol Imaging* 2021; **48**: 2652-2654 [PMID: 33638660 DOI: 10.1007/s00259-021-05275-6]

8 **Tafti D**, Kluckman M, Dearborn MC, Hunninghake J, Clayton S. COVID-19 in Patients With Hematologic-Oncologic Risk Factors: Complications in Three Patients. *Cureus* 2020; **12**: e12064 [PMID: 33489484 DOI: 10.7759/cureus.12064]

9 **Wright Z**, Bersabe A, Eden R, Bradley J, Cap A. Successful Use of COVID-19 Convalescent Plasma in a Patient Recently Treated for Follicular Lymphoma. *Clin Lymphoma Myeloma Leuk* 2021; **21**: 66-68 [PMID: 32682684 DOI: 10.1016/j.clml.2020.06.012]

**Footnotes**

**Conflict-of-interest statement:** None.

**Open-Access:** This article is an open-access article that was selected by an in-house editor and fully peer-reviewed by external reviewers. It is distributed in accordance with the Creative Commons Attribution NonCommercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited and the use is non-commercial. See: http://creativecommons.org/Licenses/by-nc/4.0/

**Provenance and peer review:** Invited article; Externally peer reviewed.

**Peer-review started:** June 16, 2021

**First decision:** July 31, 2021

**Article in press:**

**Specialty type:** Virology

**Country/Territory of origin:** Turkey

**Peer-review report’s scientific quality classification**

Grade A (Excellent): 0

Grade B (Very good): B

Grade C (Good): C

Grade D (Fair): D

Grade E (Poor): 0

**P-Reviewer:** Covino M, Ribeiro IB, Watanabe A **S-Editor:** Fan JR **L-Editor:** Wang TQ **P-Editor:** Fan JR