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LETTER TO THE EDITOR

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Living with HIV in the time of COVID-19: A glimpse of hope

Dear Editor,

As at the time of writing, the global confirmed cases of coronavirus disease (COVID-19) stand at 5 075 181 with 330 981 deaths and 1 936 331 recoveries.[1] According to the Center for Disease Control, the aged and individuals with compromised immune systems due to infections (ie, human immunodeficiency viruses [HIV], etc.) are at higher risk of contracting COVID-19. The risk of further complications due to SARS-CoV-2 infection is even higher for HIV-infected patients with low CD4 cell count, and not on antiretroviral regimens (ARVs).[2] This has created fear and panic among HIV patients globally, especially those from low-income countries. UNAIDS estimated that about 37.9 million people are infected with HIV globally, with 1.1 and 7.7 million of these people living in the United States and South Africa, respectively.[3,4] HIV-infected patients in the US, even before the outbreak of the COVID-19, had kept a stockpile of HIV medications[4] and even more so under the situation created by the pandemic, as they have been urged by the CDC to have at least a 30-day supply of their HIV medicines.[2] In contrast, the COVID-19 pandemic disrupted HIV treatment programs in South Africa and may increase mortality as a result of health facilities being overwhelmed with COVID-19 patients. Similarly, 19% of HIV-infected patients were unable to get antiretroviral medications (ART) refills due to the pandemic.[5] According to reports, more than 100 Russian AIDS prevention and control centers have been converted to COVID-19 treatment centers.[6] Similar conversions might have happened in other countries, thus denying patients access to HIV medication and therapies. An earlier report had predicted that the pandemic would have adverse effects on health programs for HIV, Tuberculosis (TB), and malaria in low and middle economies. The authors also mentioned that in high burden settings, HIV, TB, and malaria-related deaths over 5 years may increase up to 10%, 20%, and 36%, respectively, compared to the case in the world without COVID-19.[7] Table 1 summarizes cases of coinfections of HIV and COVID-19. The first HIV/SARS-Cov-2 coinfection of COVID-19 was diagnosed in only one HIV patient in Wuhan, China.[8] Benkovic et al[9] subsequently reported four cases of HIV and COVID-19 coinfection in Long Island, New York, USA. The HIV-infected patients were on HIV medications, and hence, had robust CD4 T cell counts. Among the four patients, only one required hospitalization due to further complications from influenza A. These incidents suggested that uncomplicated cases of COVID-19 in an HIV-infected patient can be managed. Furthermore, COVID-19 has been described in five patients with HIV in Barcelona, Spain, four of whom were on ART at the time of admission. Fever and cough were the common symptoms, among others. Four of the patients responded well to treatment and have been discharged, except one who required extracorporeal life support.[10] Despite the high prevalence of HIV infections in Thailand, no coinfection case had been recorded.[11] Therefore, HIV-infected patients under anti-HIV therapy with no other complications from other infections stand a chance of being cured of COVID-19. The findings have restored a hint of a smile on the faces of HIV-infected patients who were worried about complications and even death if infected with the novel virus.

Parise Adadi[1]
Osman N. Kanwugu[2]

[1]*Department of Food Science, University of Otago, Dunedin, New Zealand*
[2]*Department of Technology of Organic Synthesis, Institute of Chemical Engineering, Ural Federal University, Yekaterinburg, Russia*

Correspondence
Parise Adadi, Department of Food Science, University of Otago, Dunedin 9054, New Zealand.
Email: parise.adadi@postgrad.otago.ac.nz and pariseadadi@gmail.com

ORCID

Parise Adadi http://orcid.org/0000-0003-4724-9463
Osman N. Kanwugu http://orcid.org/0000-0003-3887-1058

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TABLE 1 Cases of coinfection of HIV and COVID-19 according to the literature

Study No.	1	2	3
Author/Country	Zhu et al[8]/Wuhan, China	Benkovic et al[9]/Long Island, NY, USA	Blanco et al[10]/Barcelona, Spain
Number of cases	1	4	5
Sex/age	P1-Male (61)	P1- Male (56); P2- Male (56) P3- Male (62); P4- Male (56)	P1- Transgender (40); P2- Male (49) P3- Male (29); P4- Male (40) P5- Transgender (31)
HIV diagnosis date	NR	P1-1995; P2-1988; P3-1996; P4-2006	P1-2007; P2-2003; P3-2013; P4-2003; P5-2020
HIV medication before admission	P1- Lopinavir/ritonavir[a]	P1- Emtricitabine, tenofovir alafenamide, dolutegravir, maraviroc	P1- Tenofovir alafenamide, emtricitabine, darunavir-boosted, cobicistat
		P2- Emtricitabine, tenofovir alafenamide, etravirine, abacavir	P2- Abacavir, lamivudine, dolutegravir[b]
		P3- Emtricitabine, tenofovir alafenamide, dolutegravir	P3- Tenofovir alafenamide, emtricitabine, darunavir-boosted, obicistata[b]
		P4- Emtricitabine, tenofovir alafenamide, elvitegravir, cobicistat	P4- Abacavir, lamivudine, dolutegravira[b]
			P5- None[c]
HIV viral load at or before admission (copies/mL)	NR	P1- 54; P2- <20; P3- <20; P4- <20	P1- <50; P2- <50; P3- <50; P4- <50; P5- 45 500
CD4 cell count (cells/μL)	NR	P1- 1206; P2- 794; P3- 1412; P4- 929	P1- 616; P2- 445; P3- 604; P4- 1140; P5- 13
Present symptoms	P1- Fever, difficult breathing	P1- Fatigue, anosmia, aguesia P2- Fever, fatigue	P1- Fever, cough, malaise, headache P2- Fever, cough
		P3- Fever, cough, fatigue, diarrhea	P3- Fever, cough, malaise, headache, dyspnea
		P4- Cough, fever	P4- Fever, cough, malaise, headache, dyspnea
			P5- Fever, cough, dyspnea
Outcome after COVID-19 medication	P1- Cured	All patients have been discharged and are recovering at home	P1- Cured; P2- still at hospital P3- Cured; P4- cured; P5- cured

Abbreviations: NR, not reported; P1, patient 1; P2, patient 2; P3, patient 3; P4, patient 4; P5, patient 5.
[a]Patient was given antibiotics and other medications.
[b]Patients were given additional antiviral and antibiotic treatment.
[c]Diagnosed recently.

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