COVID-19 Infection in An HIV-Positive Patient

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ABSTRACT

The COVID-19 pandemic affects all age groups but follows a more mortal trajectory in patients with preexisting conditions such as immune deficiency, chronic lung disease, diabetes, and cardiovascular problems. Hence, HIV-positive patients with immune deficiency are at risk, therefore, these patients need to have continuous access to treatment during the pandemic. The number of defined COVID-19 positive HIV patients is very limited even though there are approximately 37.9 million HIV-positive patients globally. Therefore, we decided to publish this study reporting an HIV patient treated for COVID-19 in our clinic.

Keywords: COVID 19, HIV, pandemic, case report

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I. INTRODUCTION

New type coronavirus SARS COV-2 first surfaced in the Chinese city of Wuhan on December 1st, 2019, to turn into a global concern in quick succession. The World Health Organization declared this a pandemic on March 11, 2020. The patients infected with COVID-19 have 80% mild symptoms, while 14% become serious and 6% attain critical conditions. Patients with pneumonia due to COVID-19 require hospital admission 10% of the time, while 10% within this group develop an acute respiratory distress syndrome (ARDS) subject to intensive care unit admission [1], [2].

While COVID-19 mortality rates are higher among elderly patients with chronic lung disease, diabetes, cardiovascular diseases, it is also known to cause multiorgan deficiencies and death among younger patients [3]. COVID-19 also poses a significant burden for patients living with HIV [4].

There are currently no specific treatments for COVID-19 with proven results and efficacy. Over 100 randomized studies involving various medications are currently ongoing to find a cure for this disease. These medications include antiretrovirals used in HIV treatment as well [1], [5].

The number of defined COVID-19 positive HIV patients is very limited even though there are approximately 37.9 million HIV-positive patients globally. Therefore, we deemed important to publish this study reporting an HIV patient that has been treated for COVID-19 in our clinic.

II. CASE

A 44-year old man was admitted to our hospital emergency room (ER) with fever and cough symptoms. It was discovered that even though the patient took Lopinavir/Ritonavir and Emtricitabine-Tenofovir disoproxil antiretroviral treatment due to acquired immune deficiency syndrome (AIDS) for the past 5 years, he had stopped taking medications in the past month. The patient had been suffering symptoms for the past 10 days and had been prescribed oseltamivir by the previous medical center, without any improvement to his general condition. On physical examination, his fever has 37.9 degree, turgor, normal tonus, bilaterally equal breath, and no ral-ronkus were detected. No anomalies were found in the cardiovascular, gastrointestinal, and genitourinary systems. Blood pressure was recorded at 120/80 mmHg, pulse rate was 80/min, and breath rate was 18/min. The patient was transferred to the infectious diseases ward following discovery of bilateral peripheral infusion in the thorax CT performed at the ER (Fig. 1). Nasopharyngeal swab test was found positive for SARS-CoV-2 by reverse transcription PCR assay. Initial treatment was lopinavir/ritonavir 400/100 mg/d, Doxycycline 2x100mg/d, Ceftriaxone 2x1 g/d iv, Emtricitabine/Tenofovir disoproxil 200/245 mg 1x1/d. HIV RNA PCR results taken during admission returned to 90 IU/ml, with aCD4 count of 623/mm³. The patient was discharged with directions of self-isolation after 5 days of hospitalization following his improvement in general condition and stable vital functions.

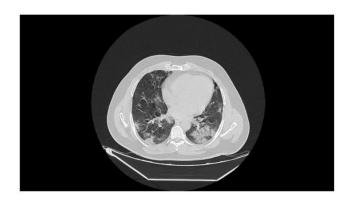


Fig. 1: Patient's Thorax CT

III. CONCLUSION

While COVID-19 impacts everyone, it is evident that mortality rates are higher among patients with comorbidities and immune deficiencies. Hence, it is especially important to evaluate patients with acquired immune deficiencies [4]. During the pandemic in April, 5 patients were reported in Spain and 1 in Wuhan, China, with co-infections of HIV and COVID-19 [6,7]. Most recently by May 18, the amount of case reports has reached a dozen, covering approximately 100 COVID-19 infected HIV patients [8]. Our case is different from these others since the patient was discharged without intensive care unit intervention. Age younger than 50 years, no preexisting conditions such as hypertension and/or diabetes, having no respiratory issues during admission, and having a CD4 number of 623/mm³ are all important factors leading to patient's improvement and discharge.

REFERENCES

- Infectious Diseases Society of American Guidelines on the Treatment and Management of Patients with COVID-19 [Internet]. [cited 2020 Jul Available https://www.idsociety.org/practice-131. from: guideline/covid-19-guideline-treatment-and-management/
- COVID-19 Rehberi [Internet]. [cited 2020 Jul 13]. Available from: https://covid19bilgi.saglik.gov.tr./tr/covid-19-rehberi.html C. Y. Lin, M. Wu, J. A. Bloom, I. J. Cox, and M. Miller, "Rotation, scale, and translation resilient public watermarking for images," IEEE Trans. Image Process., vol. 10, no. 5, pp. 767-782, May 2001.
- Islam M. S., Sobur M. A., Akter M., Nazmul K. H. M., Nazir H., Toniolo A., et al. Coronavirus Disease 2019 (COVID-19) pandemic, lessons to be learned! J Adv Vet Anim Res [Internet]. 2020 [cited 2020 Jul 13];7(2):260-80. Available from: http://bdvets.org/javar/http://doi.org/10.5455/javar.2020.g418W.-K. Chen, Linear Networks and Systems, Belmont, CA: Wadsworth, 1993, pp. 123-135.
- Shiau S., Krause K. D., Valera P., Swaminathan S., Halkitis P. N., The Burden of COVID-19 in People Livingwith HIV: A Syndemic Perspective [Internet]. Vol. 1, AIDS and Behav. Springer; 2020 [cited 2020 Jul 13]. p. 1. Available /pmc/articles/PMC7165075/?report=abstract
- Sanders J. M., Monogue M. L., Jodlowski T. Z., Cutrell J. B., Pharmacologic Treatments for Coronavirus Disease 2019 (COVID-19): A Review [Internet]. Vol. 323, JAMA; 2020 [cited 2020 Jul 13]. p. 1824–36. Availablefrom: https://pubmed.ncbi.nlm.nih.gov/32282022/
- Zhu F., Cao Y., Xu S., Zhou M., Co-infection of SARS-CoV-2 and HIV in a patient in Wuhan city, China. J MedVirol [Internet]. John Wiley and Sons Inc.; 2020 Jun 11 [cited 2020 Jul 13];92(6):529-30. Available from: https://onlinelibrary.wiley.com/doi/abs/10.1002/jmv.25732

- Blanco J. L., Ambrosioni J., Garcia F., Martínez E., Soriano A., Mallolas J., et al. COVID-19 in patients with HIV: clinical case series [Internet]. Vol. 7, The Lancet HIV. Elsevier Ltd; 2020 [cited 2020 Jul 131. e314-6. Available from: p. https://pubmed.ncbi.nlm.nih.gov/32304642/
- Härter G., Spinner C. D., Roider J., Bickel M., Krznaric I., Grunwald S., et al. COVID-19 in people living with human immuno deficiency virus: a case series of 33 patients. Infection [Internet]. Springer; 2020 Jul 13]; 14:1. Available [cited /pmc/articles/PMC7211976/?report=abstr

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