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Case Report

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Recovery of COVID-19 in a patient with recent diagnosis of HIV infection

Abstract

As of May 28, 2020, 5 765 094 cases of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) have been reported in 188 countries on five continents. Between March 6, 2020, and May 25, 2020, in Peru, a total of 129 751 confirmed cases have been registered. Since the first reports from Wuhan in China in December, 2019, Coronavirus disease 2019 (COVID-19) was described in only one patient with HIV in Wuhan, China. Only a few reports or case series have been published regarding the course of SARS-CoV-2 in patients with HIV.

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Case presentation

We present a recently case of a 77-year-old native man who was admitted for COVID-19 suspected because of fever, dyspnea, dry cough, anorexia of one week's duration. On admission to our emergency room, the patient had a fever (38,5 °C). The oxygen saturation was 90 while the patient was breathing ambient air. The patient's medical history was remarkable by sexual contact without protection in the last years.

The results of laboratory tests upon admission were remarkable for a lymphopenia (0.89 x 10^3/µl), elevated ferritin (756.4 ng/ml), mild LDH (679 U/L) and elevated CRP (220 mg/L). We used nasopharyngeal swab sample for diagnoses, amplifying the betacoronavirus E gene and the specific SARS-CoV-2 RdRp gene by PCR. Chest CT scan was performed, which showed multifocal ground glass frosted distribution in both lung fields.

The patient was started on anti- SARS-CoV-2 treatment on the day of diagnosis with hydroxychloroquine, azithromycin and methylprednisolone. Enoxaparin dose was started to prophylaxis, based on the procoagulant pattern of patients with COVID-19.[1–3]

During the hospitalization HIV infection was diagnosed by ELISA fourth generation. CD4 counts of 34 cells/µL and CV of 728 000 copies/ml were quantified, showing a very advanced late presenter. The antiretroviral therapy (ART) was started with one with boosted-protease inhibitor (lopinavir-boosted ritonavir) and two nucleoside reverse-transcriptase inhibitors (tenofovir/emtricitabine). Prophylaxis for Mycobacterium avium cellular (MAC) and for *Pneumocystis jirovecii* were started. Gas exchange gradually normalized and he was discharged to 15 days after of admission. After two months, a new CV test resulted not detectable and CD4 count increased to 270 cel/µL, the prophylaxis was retired.

A study in a cohort of 1174 HIV/AIDS patients of two central districts in Wuhan city showed 8 COVID-19 patients from 947 individuals (0.84%), which ones had an ART based in NRTI and NNRTI, with a low HIV viral load 20 copies/ml. The older age is the risk factor to occur COVID-19 in HIV/AIDS.[4] In advanced patients (late presenters), we must ensure differential diagnosis and initial antimicrobial treatment to address pulmonary opportunistic infections (eg, *Pneumocystis jirovecii*), presenting with similar clinical and radiological symptoms. Three months ago, a clinical trial found that lopinavir-boosted ritonavir was ineffective as a monotherapy against severe pneumonia associated with COVID-19 in China.[5]

Conclusion

Our findings indicated that the compromised immunity might be the reason that HIV/AIDS patients did not occur inflammatory changes and clinical symptoms, which support the early usage of corticosteroids in treatment for COVID-19. More studies of COVID-19 in patients with HIV are needed in the older adult population in lower-income settings, even more so considering the aging of the HIV population in our times

During this pandemic, the prognosis of patients co-infected with HIV and SARS-CoV-2 might be improved implementing health education programmers in the HIV population to avoid clusters of SARS-CoV-2 transmission.

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None.

Conflicts of interest

The authors declare no conflicts of interest.

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