

## Myocarditis in an HIV-infected patient with Covid-19.

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### Abstract

**COVID-19 can cause myocarditis with complex possible pathophysiology. A case of acute myocarditis in an HIV-infected patient with COVID-19 has been reported here. The patient's condition progressively improved after proper treatment. But still we have to observe many different cases to get the full picture of COVID-19 in HIV-coinfected people.**

**Keywords:** Myocarditis, Cardiac MRI, Pulmonary hypertension.

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### Description

We report a case of acute myocarditis in an HIV-infected patient with COVID-19. In the Emergency Department, the patient had a positive nasopharyngeal swab for SARS-CoV-2; pO<sub>2</sub> was 66 mmHg and pCO<sub>2</sub> 36 mmHg. White blood cells(13,000/ $\mu$ L; N 9,000; L2,200), CRP (108 mg/dL), LDH (336 IU/L) and creatinine (175  $\mu$ mol/L) were increased. A chest X-ray was apparently normal, while an electrocardiogram showed atrial premature complexes, diffuse inverted T waves in lateral leads, and prolonged QT interval. Troponin levels were 52, 516 and 1,583 ng/L (normal<14 ng/L) at three successive tests, and an echocardiogram showed left ventricular hypertrophy.

Myocarditis and pericarditis were diagnosed [1,2]. The patient was admitted to the Intensive Care Unit and treated with enoxaparine 6,000 IU bid, acetylsalicylic acid 250 mg as loading dose, prednisone 25 mg, doxazosin 4 mg, amlodipine 10 mg and hydroxychloroquine 400 mg bid as loading dose, and then 200 mg bid [3-6]. Rilpivirine was stopped and lopinavir/ritonavir added to his antiretroviral regimen. Oxygen therapy with Venturi mask at a 35% FiO<sub>2</sub> setting was started. Blood cultures were negative as well as urinary legionella and pneumococcal antigens. Serology for parvovirus B19 and enterovirus was negative, and cytomegalovirus, herpesviruses, Epstein-Barr virus were negative by polymerase chain reaction[7].

### Discussion

The patient's condition progressively improved. Troponine decreased to 475 ng/L over six days, and a new echocardiogram did not show any changes and did not reveal any vegetations on cardiac valves. The patient was transferred to our Department for follow-up, nine days after admission; his blood pressure remained high and a third echocardiogram detected pulmonary hypertension (PAPs 40+10 mmHg). A cardiac MRI confirmed a diagnosis of myocarditis [8].

Two nasopharyngeal swabs for SARS-CoV-2 were negative on days 14 and 16 after admission. The patient was discharged in good condition after three weeks of hospitalization, on doxazosine, amlodipine, nebivolol and ramipril 2.5 mg. ARV therapy was changed to TAF/FTC and raltegravir, to minimize possible drug interactions [3].

### Conclusion

We have reported the first case of myocarditis during COVID-19 in a person living with HIV. The outcome was positive. Few cases of COVID-19 in HIV-infected patients (reviewed in 3) have been described so far in the literature, and many more will have to be observed to get the full picture of COVID-19 in HIV-coinfected people.

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