

## Antivirals/interferon- $\alpha$ -1b

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### **Elevated aminotransferases and vomiting following off-label use: case report**

A 41-year-old man developed elevated aminotransferases and vomiting following an off-label treatment with lopinavir/ritonavir, umifenovir and interferon- $\alpha$ -1b for severe acute respiratory syndrome related coronavirus-2 infection (COVID-19).

The man presented to a fever clinic in China with a five day history of fever, cough with white phlegm, loss of appetite, general weakness and shortness of breath. During examination, he revealed exposure to a COVID-19 positive patient. Consequently, he was admitted and an empiric antibiotic treatment was started with ceftriaxone and azithromycin. Subsequent RT-PCR tests and chest CT scan findings were consistent with the diagnosis of COVID-19. The empiric antibiotic therapy was stopped. On hospital day 5, he started receiving off-label antiviral treatment with oral lopinavir/ritonavir 400/50mg two times a day, oral umifenovir [arbidol] 200mg three times a day and inhalation of aerosol of interferon-alpha-1b 50 $\mu$ g two times a day. He additionally received ibuprofen. After seven days of the antiviral therapy, an improvement was noted in his clinical condition. On hospital day 11, RT-PCR of the nasopharyngeal swab was negative. Mild elevation was noted in the levels of alanine aminotransferase and glutamic oxaloacetic transaminase. He also vomited.

Due to the side effects, and clinical improvement of COVID-19, the man's antiviral therapy was stopped. He remained in the hospital until hospital day 16. On hospital day 16, he was discharged following recovery.

Xie X, et al. Combination antiviral therapy with lopinavir/ritonavir, arbidol and interferon-alpha1b for COVID-19. *Antiviral Therapy* 25: 233-239, No. 4, Jan 2020. Available from: URL: <http://doi.org/10.3851/IMP3362>

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