

Cladribine/hydroxychloroquine

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COVID-19-pneumonia, lymphopenia and off label use: case report

An approximately 59-year-old man developed COVID-19 pneumonia and lymphopaenia during treatment with cladribine for multiple sclerosis. Later, he also received off-label treatment with hydroxychloroquine for the COVID-19 pneumonia.

The man was diagnosed with multiple sclerosis (MS) at the age of 55 years (in 2016), and had been receiving disease modifying treatment with dimethyl-fumarate. After remaining free from disease activity for several years, he experienced a relapse with paresis of right leg in November 2019. Therefore, on 10 March 2020, his treatment was started with cladribine 90 mg/cycle [route not stated]. At this time, the absolute lymphocyte count was normal at 1250 / μ L. However, 14 days after the first week of treatment, he presented with fever and malaise. Due to ongoing COVID-19 pandemic, he was tested for SARS-CoV-2, which showed positive result. Additionally, acute lymphocyte count was noted as 240 / μ L indicating CTC grade III lymphopenia. As his symptoms were mild, he was not hospitalised, but due to persistent fever (39°C) and progressive respiratory symptoms with thoracic pain, he presented to the hospital's emergency department after 12 days. Subsequently, he was hospitalised for clinical monitoring. At the time of admission, laboratory tests showed the following: CRP 122 mg/L and procalcitonin 0.13 ng/mL. based on the examinations, bacterial superinfection was suspected. Lung ultrasound showed suspicious findings, which was consistent with pulmonary consolidation.

Therefore, the man's treatment was started with ampicillin/sulbactam, which was later changed to piperacillin/tazobactam due to increased need of nasal oxygen supply and increasing inflammatory markers. Also, due to COVID-19 pneumonia, he was started on off label hydroxychloroquine therapy for a scheduled duration of 5 days [route and dosage not stated], along with aviptadil. No pathogens were identified during culture tests. His hospitalisation course remained mild and ventilator support was not required. He was discharged after 16 days of hospitalisation. On day 28 after onset of infection, he was still positive for SARS-CoV-2, but his neurological status was noted as normal. Due to the infection, his subsequent cladribine doses were postponed. Eventually, he recovered without any sequelae.

Dersch R, et al. COVID-19 pneumonia in a multiple sclerosis patient with severe lymphopenia due to recent cladribine treatment. Multiple Sclerosis Journal 26: 1264-1266, No. 10, Sep 2020. Available from: URL: <http://doi.org/10.1177/1352458520943783>

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