Hydroxychloroquine/mycophenolate mofetil/rituximab

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Human coronavirus infection: case report

A 24-year-old woman developed human coronavirus (HCoV-HKU1) infection during immunosuppressive treatment with hydroxychloroquine, mycophenolate mofetil and rituximab for systemic lupus erythematosus (SLE).

The woman, who had a history of SLE with acute pericarditis (diagnosed 4 years previously), nephritis and Libman–Sacks endocarditis, was hospitalised due to worsening shortness of breath and cough. Also, she complained of chest pain that was worse on lying flat in addition to orthopnoea and paroxysmal nocturnal dyspnoea. Three weeks previously, she had presented to another hospital for cough, and a moderate pericardial effusion was detected.

Hence, prednisone, colchicine, pantoprazole and torasemide [torsemide] had been initiated. The woman had been receiving chronic immunosuppression with hydroxychloroquine, mycophenolate mofetil and rituximab [*routes and dosages not stated*]. The symptoms had worsened during the steroid taper, and hence, she was admitted to the hospital. On current admission, she had elevated levels of ESR and ultra-sensitive CRP. PCR detected human coronavirus HKU1, while other viruses were negative. An echo showed trivial pericardial effusion, which was adjacent to the left ventricle. Cardiac MRI to assess pericardial inflammation was performed. T2 STIR imaging and pericardial late gadolinium enhancement imaging revealed pericardial thickening, oedema and circumferential enhancement. Additionally, a small pericardial effusion was also detected. Initially, SLE was considered to be primarily responsible for the pericarditis flare, while she also had an associated HKU1 infection. The HCoV-HKU1 infection was felt to have been secondary to the immunocompromised state from multiple immunosuppressive medications (hydroxychloroquine, mycophenolate mofetil and rituximab) that made her prone to viral infections [*durations of treatments to reaction onset not stated*]. She started receiving aspirin along with colchicine. Additionally, she was treated with anakinra as she had an autoimmune background and developed pericardial inflammation while receiving multiple anti-inflammatory medications. Subsequently, her condition stabilised, and she was discharged on a slow prednisone taper. CRP and ESR levels trended down over the following weeks. She remained stable on anakinra and could discontinue aspirin and steroids, without any further recurrence. She continued to receive hydroxychloroquine, mycophenolate mofetil and rituximab for SLE. She followed-up for the monitoring of SLE. She eventually tapered prednisone and did not experience any further recurrence during a 6-month follow-up period.

Furqan MM, et al. Recurrent pericarditis associated with human coronavirus (HKU1) infection in a patient with systemic lupus erythematosus (SLE). Echocardiography 38: 1077-1080, No. 6, Jun 2021. Available from: URL: https://onlinelibrary.wiley.com/doi/10.1111/echo.15062

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