Immunosuppressants and antiviral

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COVID-19 and lack of efficacy: case report

In a case series of 5 patients, a 56-year-old man was described, who developed COVID-19 during immunosuppressant treatment with mycophenolate mofetil, prednisolone and tacrolimus for liver transplantation. Additionally, he exhibited a lack of efficacy during treatment with remdesivir for COVID-19 [*not all routes stated; durations of treatments to reactions onsets not stated*].

The man was admitted to the emergency department of hospital with fever, myalgia and severe dyspnoea. His medical history included liver transplantation past year due to cryptogenic cirrhosis. On admission, he was obtunded and critically ill with altered vital signs, BP of 160/85mm Hg, tachypnoea with a respiratory rate of 22 times/minute and tachycardia with HR of 120 beats/minute. During admission, his body temperature was elevated to 38.5°C. He had been receiving immunosuppressant therapy included prednisolone 10mg daily, mycophenolate mofetil [CellCept] 1500mg twice daily and tacrolimus 3mg twice daily for 1 year. Laboratory investigations showed severe lymphopenia and normochromic normocytic anaemia with normal AST, ALT, alkaline phosphatase and total serum bilirubin. Arterial blood gas analysis revealed acute respiratory acidosis. His oxygen saturation was 72% in room air; therefore, he was placed on ventilation. His physical exam were unremarkable except for disseminated crackles all over the lungs, more prominently in the basal areas of the lungs. Spiral chest CT showed disseminated bilateral multifocal ground-glass opacities consistent with COVID-19. Secondary evaluations for opportunistic infections were negative. His reverse transcriptase (RT)-PCR for COVID-19 was found to be positive. Based on the presenting symptoms and investigational findings, he was diagnosed with COVID-19.

The man was started on IV remdesivir 200mg infusion for the day 1 and 100mg daily thereafter and unspecified broad-spectrum antimicrobials [antibiotics]. Subsequently, his mycophenolate mofetil therapy was discontinued; but, was continued on prednisolone and tacrolimus. During admission, his clinical condition continuously deteriorated. Later, he developed acute respiratory distress syndrome (ARDS), which required mechanical ventilation. Despite standard treatments, he underwent haemoperfusion as supportive therapy for COVID-19, but he was unresponsive (lack of efficacy) and died because of it.

Hatami B, et al. A case series of variable manifestations of COVID-19 in liver transplant recipients. Middle East Journal of Digestive Diseases 13: 363-369, No. 4, Oct 2021. Available from: URL: http://www.mejdd.org/index.php/mejdd/article/download/2410/2224

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