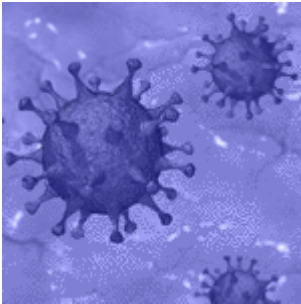


The potential benefit of high-dose intravenous Ig in severe COVID-19



The number of Corona Virus Disease 2019 (COVID-19) patients is continuously rising, and to date, the novel coronavirus 2 (CoV-2) causing the disease has led to more than 38,000 deaths worldwide. Although many therapeutic approaches are currently being discussed, no optimal treatment protocol for severe infections has been defined.

In this report, the authors describe case studies of a promising clinical outcome of three patients presenting with severe COVID-19 and treated with high-dose intravenous immunoglobulin (IVIg).

The treatment protocol consisted of IVIg administration at 0.3-0.5 g/Kg per day for five days. According to the authors *"All patients were clinically improved shortly following the administration, with the temperature back to normal in one to two days, and breathing difficulties alleviating in 3-5 days"*.

IVIg confers passive immunity and has proven efficiency as an immunomodulatory treatment for inflammatory and auto-immune diseases. It has also shown clinical benefits with good tolerance in previous studies of Severe Acute Respiratory Syndrome (SARS). The exact mechanism for improved immune function after IVIg is not fully understood.

The authors emphasise the importance of the therapeutic

intervention timing as “Patients might not receive much benefit when overall systemic damage has already taken place”. The clinical course of symptomatic COVID-19 may present in three phases. The first phase follows the acquisition of the virus and is marked by viral replication. Then, some patients experience an accelerating second phase with clinical deterioration that can be fatal. The third phase consists of the final recovery. According to the authors, the best timing of administering antivirals is in the first phase. An immunomodulatory treatment, including high-dose IVIg, however, should be effective at the beginning of the accelerating phase, usually associated with lymphopenia and elevated inflammatory markers.

To note, the [NCT 04261426 clinical trial is currently evaluating IVIg high dose use in treating severe COVID-19](#). Results will hopefully offer insights into the efficacy and timing of this treatment in patients with severe COVID-19.

Journal Article: Cao et al., 2020. [High-dose intravenous immunoglobulin as a therapeutic option for deteriorating patients with Coronavirus Disease 2019](#), *Open Forum Infectious Diseases*.

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