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Editorial

Apheresis and Covid-19



Since vaccination for SARS-CoV-2 coronavirus has started with great impact in societies, the trajectory of patient numbers infected with the virus has improved. However, variants of SARS-CoV-2 have emerged and more people have been infected; therefore, pandemic status is still far from resolution and new or improved strategies are needed. Apheresis services may belong among them with potential implementation in a way that could achieve the optimum for Covid-19 patients outcome.

The necessity of extracorporeal apheresis use, directed at the inflammatory mediator elimination is based on the pathophysiological failures shown in coronavirus infection patients. Extracorporeal therapy can help to prevent a multiple organ failure and seems to increase the survival rate. Therefore, exploring the possibilities of various therapeutic apheresis methods of treating severe COVID-19 patient is still of a great importance. The above notice is highlighted by the profound suggestion that there are no absolute contraindications to apheresis treatment for patients with severe COVID-19.

It is well known that Therapeutic Apheresis is a method of extracorporeal hemocorrection that plays an important role in patient management and treatment of several diseases in the whole spectrum of medicine. During the procedure, different pathogenic components circulating in blood are eliminated from the circulation of the diseased humans. A careful evaluation of individual patient for an apheresis indication is always essential; however, it is even more critical with the ongoing pandemic, particularly if the patient's condition requires urgent apheresis or apheresis cannot be delayed, and if the apheresis procedure takes a critical role in management of the patient or it is a second-line therapy. At the same time, it is not clear if apheresis treatment apart from removing mediators of the infection also removes from the circulation "basic" components for the defense of the diseased person.

It should be noted that to date, there has not been enough clinical

data to fully understand the role of apheresis methods in the survival and mortality of COVID-19 patients. This is due to the lack of large randomized trials, and most information available is based on the description of a single clinical case or a series of cases, allowing to only assessing the individual patient's recovery rate and laboratory parameters before and after the procedure. Of course, the above reality has one way ticket since the willing of every physician around the globe is to treat his patients no matter what. Currently, the most relevant SARS-CoV-2 variant of concern is Omicron which is less clinically severe compared to the Delta variant. Patients with Omicron variants have fewer admissions to hospitals and especially to the intensive care department, and as a result, the mortality rate caused by Omicron is lower compared to other SARS-CoV-2 variants of concern (Delta variant, Gamma variant). We all know that the behavior of the virus over the last two and half years has significant impact on the clinical practice. In other words, we are not sure if the variant is affected by the apheresis procedure in a different way each time.

Individualization is a necessity Nowadays for our patients receiving apheresis treatment. Under the COVID-19 pandemic, apheresis procedure should be performed with a careful evaluation of the patients for their conditions from their diseases and COVID-19 status. Indication of apheresis procedure and comparison with other treatment possibilities, especially when the time limits are quite strict is of great importance for the physicians.

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