INTERNATIONAL SOCIETY FOR APHERESIS

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ISFA free webinar

Challenge to Organ Failure in COVID-19 patients; Impact of Blood Purification Therapy

Chair. **Yoshihiro Endo** (Japan)

Session 1 (20min):

Moderator: **Yoshihiro Endo** (MD, Japan)

Speaker: **Naoshi Takeyama** (MD, Japan)

"Current COVID-19 situation in Japan and PMX hemoperfusion as a potential therapeutic options in COVID-19 by removal of circulating neutrophil extracellular traps-related nuclear proteins"

Session 2(20min):

Moderator: **Chi Ryang Chung** (MD, Korea)

Speaker: **Nattachai Srisawat** (MD, Thailand)

"Blood purification therapies and COVID-19 patients"

Panel discussions(20min):

Moderator: **Yoshihiro Endo**

Panelists: **Chi Ryang Chung, Naoshi Takeyama, Nattachai Srisawat**

on-demand

September 30, 2021 ～ November 30, 2021

Register ➡

https://www.e-isfa.org/136115.html

International Society For Apheresis Seminar Secretariat
Contact:https://www.e-isfa.org/form?form_id=4816

Shiga University of Medical Science Seta Tsukinowa-cho, Otsu, Shiga 520-2192, Japan

summary

Current COVID-19 situation in Japan and PMX hemoperfusion as a potential therapeutic options in COVID-19 by removal of circulating neutrophil extracellular traps-related nuclear proteins

Professor Naoshi Takeyama
The Department of Emergency and Critical Care Medicine at Aichi Medical University

In Japan, patients with COVID-19 who develop acute respiratory distress syndrome (ARDS) are treated with mechanical ventilation, extracorporeal membrane oxygenation, prone positioning, extracorporeal blood purification, and various drugs.
We will introduce the treatment and outcome of patients with COVID-19 ARDS who were admitted to Aichi Medical University and required mechanical ventilation.

Blood purification therapies and COVID-19 patients

Associate Professor Nattachai Srisawat
Division of Nephrology, Department of Medicine, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand, Excellence Center for Critical Care Nephrology, King Chulalongkorn Memorial Hospital, Bangkok, Thailand.

The emergence of coronavirus disease 19 (COVID-19) has become a devastating condition affecting millions worldwide. Severe COVID-19 infection shares common features with sepsis syndrome and with bacterial coinfection may result in bacterial toxins, which might contribute to disease severity. Furthermore, high level of bacterial DNA and LPS were found in bloodstream of patients with severe COVID-19. At present, the only therapies for critically ill patients with COVID-19 include supportive care, IL-6 inhibitor, monoclonal antibody, and low-dose corticosteroids. Many other potential treatments such as favipiravir, chloroquine/hydroxychloroquine, and convalescent plasma are under investigation with unclear efficacy. Many recent reports suggested the high incidence of secondary bacterial infection in severe COVID-19 patients judging from the rate of empirical antibiotics, which varied from 58 to 80.3%. Endotoxin is a part of the cell wall of gram-negative bacteria. Endotoxin has been extensively investigated and acknowledged as one of the key triggers of lethal shock during severe sepsis and also one of the primary drivers of systemic inflammation. Recently, we reported the presence of endotoxin in severe COVID-19. Furthermore, we also demonstrated 6 severe COVID-19 patients received endotoxin adsorbent (EA) therapy. All of the 6 patients had severe COVID-19 infection with acute respiratory distress syndrome (ARDS). Among these, 5 of them were mechanically ventilated and 4 had complications of secondary bacterial infection. The endotoxin activity assay (EAA) results of pre-EA therapy ranged from 0.47 to 2.79. All patients have survived and were finally free from the mechanical ventilation as well as had improvement in PaO_2/FiO_2 ratio and decreased EAA level after EA therapy.