Extracorporeal Cytokine Hemoadsorption as Rescue Treatment in Critically ill Patients with COVID-19 Pneumonia.

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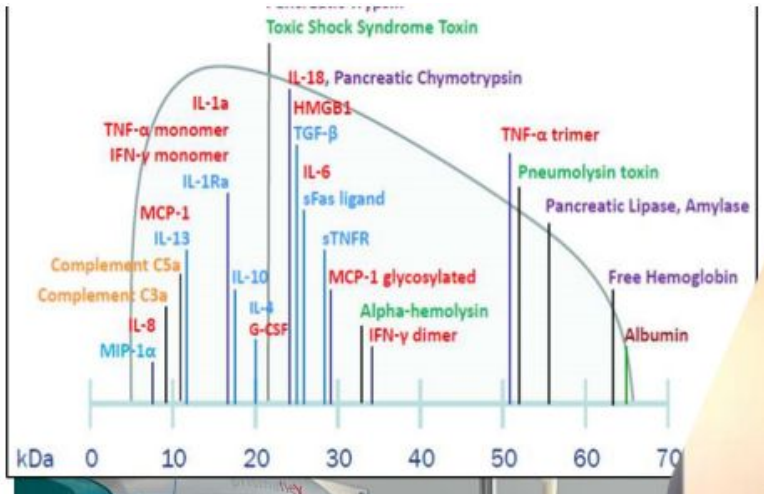
Introduction

Cytokine storm plays an important role in the pathophysiology of COVID-19 disease. Extracorporeal hemadsorption (HA) is a potential adjunctive therapy in severe cases of COVID-19 associated pneumonia. In this retrospective study we report data from critically ill patients with HA during the first wave of the pandemic in a private hospital in Puebla, Mexico.

Results

Cytokine storm plays an important role in the pathophysiology of COVID-19 disease. Extracorporeal hemadsorption (HA) is a potential adjunctive therapy in severe cases of COVID-19 associated pneumonia. In this retrospective study we report data from critically ill patients with HA during the first wave of the pandemic in a private hospital in Puebla, Mexico.



Methods and Materials

We retrospectively analyzed the medical records of critically ill patients with COVID-19 pneumonia, severe acute respiratory failure and hypercytokinemia were analyzed. All the patients underwent cytokine hemadsorption using an extracorporeal adsorber with advanced porous polymer sorbent bead technology. Clinical and laboratory data (D-dimer, Ferritin, C-reactive Protein and Lactic Dehydrogenase) were collected: on admission, before and after HA therapy.

Conclusions

Critically ill patients with COVID-19 with severe acute respiratory failure and hypercytokinemia who received adjuvant treatment with cytokine hemadsorption showed a significant reduction in inflammation biomarkers levels. We found no mortality improvement in our study; this may be due to the delayed response of the specialists in the Intensive Care Unit department. Further studies are needed in order to improve early intervention, before cytokine storm.

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