

THE USE OF CYTOSORB THERAPY IN A PATIENT WITH GANGRENOUS CHOLECYSTITIS SEPTIC SHOCK: A CASE REPORT

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Background

Dysregulated systemic inflammatory response in septic shock often results in overwhelming cytokine storm evolving into fulminant sepsis, with multiple organ dysfunction and early death. Extracorporeal cytokine adsorption with the CytoSorb cartridge in addition to regular therapy is a new treatment that could help in managing septic shock patients and reaching shock reversal.

Materials and Methods

The following report describes the case of a 63-year-old female patient who was admitted to our Intensive Care Unit with the diagnosis of septic shock. Prior to admission, the patient suffered from severe fever (39°C) in the previous days, frequent emesis accompanied by abdominal discomfort and diarrhoea. Immediately at the arrival, the patient was intubated and mechanical ventilation was started. Chest X-Ray was performed and revealed left pulmonary consolidation, whereas clinical examination allowed the diagnosis of right breast mastitis. Faced with this clinical picture, inotropic support and antibiotic therapy with Meropenem, Colistin, Rifampicin and Daptomycin were started and surgical debridement of breast wound was carried out. Traditional therapy for septic shock led to shock reversal and improvement of the patient's general condition. A few days later, high fever showed up and the markers of sepsis resulted elevated also. A new diagnosis of septic shock was made, this time related to gangrenous cholecystitis. Extracorporeal cytokine adsorption with CytoSorb was then initiated in order to support regular therapy and modulate uncontrolled inflammatory response. The adsorptive column was installed into the Diapact (B Braun) machine and used in hemoperfusion mode, since there was no need of renal replacement therapy. Heparin was administered to reach the correct anticoagulation and flow was set at 150 ml/min. After 11,5 hours, femoral catheter dislocation caused an important bleeding, which forced us to interrupt the treatment.

Results

Despite this complication, that was not related to the extracorporeal therapy, the patient's clinical picture noticeably improved. We can report the reduction of inotropic drugs dosage during CytoSorb treatment, but we had to increase the dose again because of the catheter-related bleeding. In general, we obtained shock reversal (reduction in CRP levels, disappearance of fever) and the patient was operated in stable clinical conditions with a subsequent totally recovering.

Conclusions

In this case of gangrenous cholecystitis sepsis applying all traditional therapeutic interventions and CytoSorb as adjunctive therapy resulted in rapid improvement in the hemodynamic situation and resolution of the septic shock condition. CytoSorb along with standard of care therefore appears to be a promising therapy in critically ill patients by facilitating expeditious recovery from the hyperinflammatory state, resurrecting organ function and preventing sequential organ failure.