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## Introduction

Septic shock represents a critical clinical condition characterized by a disproportionate systemic inflammatory response to infection, often complicated by multiorgan failure (MOF) and high mortality rates. CytoSorb is an adjunctive therapeutic support capable of adsorbing cytokines, bilirubin, myoglobin, toxins, and drugs, thereby improving patient clinical outcomes. This narrative review presents six cases of critically ill patients with septic shock treated with CytoSorb in combination with Continuous Renal Replacement Therapies (CRRT), highlighting the positive clinical effects observed.

## Methods

Six clinical cases were selected, all characterized by refractory septic shock complicated by multiorgan failure. Patients had APACHE IV scores ranging from 60 to 100, corresponding to estimated mortality rates between 40% and over 90%. All patients were treated with CytoSorb integrated into CRRT, with treatment duration ranging from 12 to 72 hours (average duration: 60 hours).

## Results

All cases showed recovery of urine output, improvement in renal function indices, and normalization of lactate levels, with discontinuation of vasopressor support within 72 hours from treatment initiation. In five patients, hepatic and/or respiratory dysfunction resolved as well, allowing for extubation or decannulation. In two cases of CMV (Cytomegalovirus) and EBV (Epstein-Barr Virus) infection, and drug overdose, the treatment contributed to the removal of toxic and immunologic agents. All patients survived the critical phase and were transferred to non-intensive care units. No adverse events related to CytoSorb therapy were reported.

## Conclusion

Hemoadsorption therapy with CytoSorb, combined with CRRT, demonstrated a favorable impact on early stabilization of patients with septic shock and MOF, even in complex clinical scenarios with poor prognostic scores. Although based on a limited case series, these findings suggest a potential role for CytoSorb in attenuating the cytokine storm and promoting organ function recovery.

CytoSorb confirms as an effective and potentially life-saving adjunctive therapy, significantly improving outcomes in critically ill patients by reducing the need for intensive support and accelerating clinical stabilization.