

Use of Extracorporeal Blood Purification Therapies including CytoSorb on acute myeloid leukemia (AML) patients with sepsis

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Introduction

This is a brief case series evaluating the use of CytoSorb® therapy in the management of sepsis in patients with acute myeloid leukemia (AML). The treatment of acute myeloid leukemia (AML) requires careful management, especially when complicated by sepsis. Sepsis in these patients can be managed with various approaches, one of which includes ExtraCorporeal Blood Purification Therapies (EBPTs).

Methods

The study retrospectively analyzed the use of CytoSorb® (an EBPT) in six AML patients who were septic. The specific protocol included a combination of therapies: LPS (lipopolysaccharide) adsorbers, CytoSorb, and continuous renal replacement therapy (CRRT).

Results

After sequential therapy, several clinical markers showed improvement (see figure 1):

- Procalcitonin (PCT), a marker of sepsis, decreased from 7.68 ng/ml (before therapy) to 1.28 ng/ml (after therapy).
- SOFA (Sequential Organ Failure Assessment) score, which indicates organ dysfunction, improved from 10 to 7.
- SAPS II (Simplified Acute Physiology Score), a scoring system to assess the severity of disease, also showed improvement from 46 to 40.

Mortality in the cohort was 33%, which was lower than the expected mortality rate of 45% based on the patients' severity (SOFA and SAPS II score)

Conclusion

This study represents one of the first case series exploring the potential benefits of EBPT, particularly CytoSorb, in treating sepsis in AML patients. While the results are promising, additional research is needed to confirm these findings and further evaluate the efficacy of this approach.

Figure 1 (PCT, SOFA, SAPS II score pre and post treatment)

