Alteco® **LPS Adsorber**

SCIENTIFIC SHEET

Endotoxin elimination in patients with septic shock: an observation study

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- This study provides strong arguments for using the Alteco LPS Adsorber on patient with septic shock and endotoxemia.
- Reduced endotoxin activity was seen in the treatment group and a simultaneous decrease in SOFA score, vasopressor requirement as well as decreased serum lactate level.
- The use of Alteco LPS Adsorber improves organ function in patients with confirmed endotoxemia regardless of the type of bacterial infection.
- Once again confirming that the LPS Adsorber is a safe and easy product to use in patients with septic shock ensuring successful treatments..

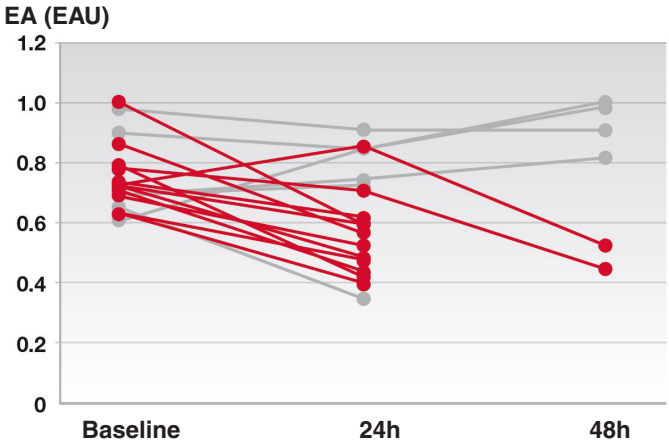
Case series

This is an open observational cohort study investigating the effectiveness of endotoxin elimination with the Alteco LPS Adsorber in patients with septic shock and endotoxemia.

The aim of the study was to study whether the Alteco LPS Adsorber reduces organ failure and to assess the usefulness of the Spectral Diagnostics EAA (Endotoxin Activity Assay) in guiding the endotoxin elimination therapy.

Method

64 patients were recruited from the general ICU in Wroclaw, Poland. The patients were tested with the Spectral EAA, a test based on the activation of neutrophils by endotoxin as an indicator for endotoxemia. According to the manufacturer, the EAA level is considered low <0.4, intermediate 0.4-0.59 and high ≥0.6.



Endotoxin activity (EA) in the blood samples of patients with septic shock who received standard treatment plus LPS elimination, measured at the baseline (n = 18), at 24 h after the first session (n = 18), and 24 h after the second session (n = 6) of endotoxin elimination

Patients with septic shock and EAA <0.6 received standard care (44 patients) whereas the most severe patients i.e. patients with EAA ≥0.6 (18 patients) additionally received Alteco LPS Adsorber therapy. Endotoxin elimination therapy was initiated within 20 hours from diagnosis of septic shock (mean 16h).

In cases with persistent high EAA after the first therapy session (33%), a second session was performed after 24h. Unfractionated heparin was used and either LPS Adsorber as hemoperfusion or hemofiltration in sequence with the LPS Adsorber.

Both groups present a severe but homogenous range of SOFA scores (9-15 at baseline for the Alteco group, and 8-13 for the control group) whereas the Alteco group also had a high EAA which is associated with a worse clinical outcome (Marchall JC et al, MEDIC study 2004).