Effect of intraoperative haemoadsorption therapy on cardiac surgery for active infective endocarditis with confirmed Staphylococcus aureus bacteraemia.

Haidari Z, Leiler S, Mamdooh H, Fittkau M, Boss K, Tyczynski B, Thielmann M, Bagaev E, El Gabry M, Wendt D, Kribben A, Bertsch T, Ruhparwar A, Fischlein T, Kalisnik JM

Interdiscip Cardiovasc Thorac Surg. 2023;36(1):ivad010

Key Findings

Intra-operative Haemoadsorption has shown to:

- **Reduce vasopressors requirement and mortality**
- **Improve clinical outcomes**

in patients after surgery for active Staphylococcus aureus infective endocarditis.

Objective

To study the effect of intraoperative haemoadsorption (HA) on postoperative outcomes in patients with Staphylococcus aureus (SA) infective endocarditis, associated with significant morbidity and mortality.

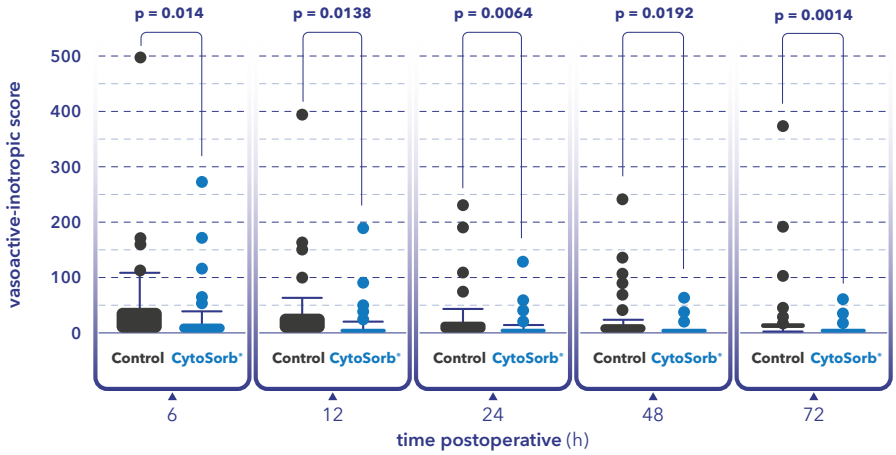
Methods

- Patients with confirmed SA IE undergoing cardiac surgery were included in a dual-centre study between January 2015 and March 2022. Patients treated with intraoperative HA (HA group, N=75) were compared to patients not treated with HA (control group, N=55).
- Primary outcome was vasoactive-inotropic score within the first 72 h postoperatively.
- Secondary outcomes were sepsis-related mortality (SEPSIS-3 definition) and overall mortality at 30 and 90 days.
- The analysis was a retrospective evaluation of prospectively collected data.

Results

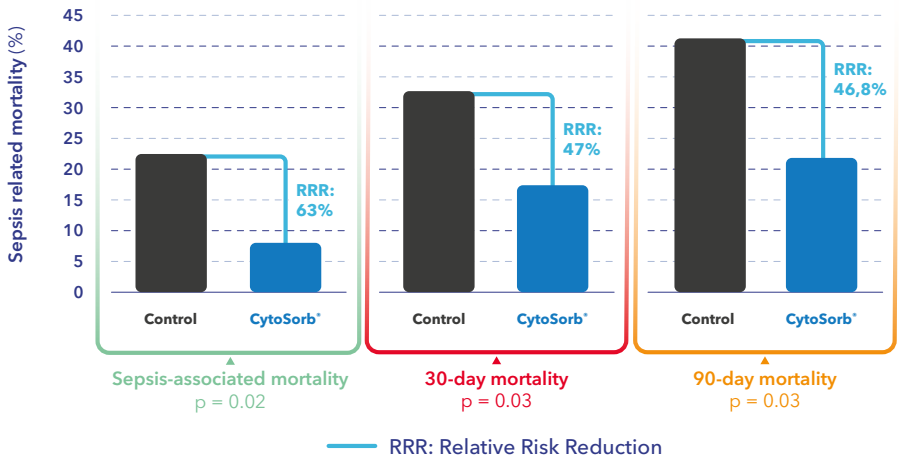
Intraoperative use of CytoSorb® Therapy in confirmed S. aureus IE patients undergoing surgery was associated with:

- Significantly lower postoperative vasopressor and inotropic requirements at each timepoint (6, 12, 24, 48 and 72 h)

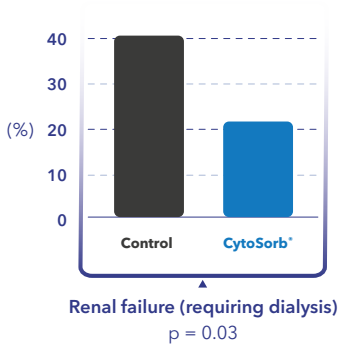


CytoSorbents™

- Significantly lower sepsis-related and overall 30- and 90-day mortality. This corresponds to a number needed to treat of 5: 1 life saved for every 5 patients treated (at 90 days) and a relative mortality risk reduction of 46.8% compared to standard therapy.



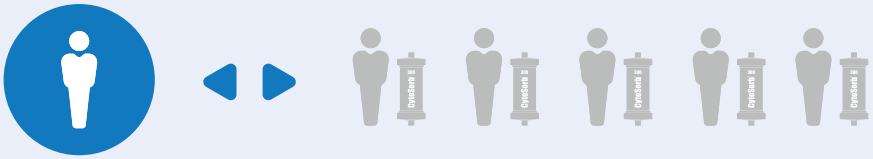
- Significantly lower need for new postoperative RRT.



Conclusions

"Intraoperative HA appears to attenuate the severity of postoperative sepsis, reducing not only the need for vasopressors but also 30- and 90-day mortality in patients undergoing cardiac surgery for IE caused by S. aureus."

For every 5 patients treated with CytoSorb®
1 life saved



CytoSorbents Europe GmbH

Müggelseedamm 131
12587 Berlin | Germany

T +49 30 65 49 91 45
F +49 30 65 49 91 46
support@cytosorbents.com