

Category : **Sepsis/septic shock: management**

A258 - The international, prospective cosmos registry on the use of cytosorb® in critically ill patients: preliminary results after first 100 patients

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Introduction:

The International COSMOS (CytOSorb® TreatMent Of Critically Ill PatientS) Registry tracks utilization patterns and clinical outcomes of the CytoSorb® hemoadsorption device in real-world critical care settings.

Methods:

Data is collected at various points: before and during CytoSorb®, 24 hours after treatment, at Intensive Care Unit (ICU) and hospital discharge, and day 90 (+20). T-tests or Wilcoxon rank sum tests are used for continuous variables and data are presented as mean ± standard deviation or median [interquartile ranges].

Results:

A total of 100 patients (30% female, age 58.6 ± 15.89) from 12 sites were included in this analysis. CytoSorb® was applied for various critical care indications (Figure 1), mean number of used adsorbers was 2.5 ± 2.14 .

Mean APACHE II was 23.5 [15.0, 30.0] and SOFA score 12.0 [9.0, 14.0] over the whole cohort with an actual ICU-mortality rate of 40.4% and a median ICU stay of 17 [10.0, 27.0] days. In the sepsis sub-cohort median SOFA

score before CytoSorb® Therapy was 13.0 [11.0, 15.0] whereas actual ICU-mortality was 41.5%, lower than

expected according to SOFA score. The platform used for integration of CytoSorb® was continuous renal replacement therapy (CRRT) (70.8%), standalone hemoperfusion (13.5%), extracorporeal membrane oxygenation (ECMO) (12.4%), and the remaining slow low efficiency dialysis (SLED) or intermittent hemodialysis. Compared to baseline significantly lower plasma levels for lactate ($p < 0.0001$) and creatinine ($p < 0.0001$) were observed after CytoSorb® treatment whereas albumin did not change ($p = 0.315$). Mean norepinephrine (NE) dosage went down significantly from 0.909 to 0.386 $\mu\text{g}/\text{kg}/\text{min}$ ($p = 0.030$) and NE/MAP ratio from 0.012 to 0.005 ($p = 0.033$).

Conclusion:

The International COSMOS Registry delivers real world data and depicts a broad variety of indications and platforms for integration of the device. Lactate, creatinine, myoglobin and need for norepinephrine decreased significantly during CytoSorb® treatment.

Image :

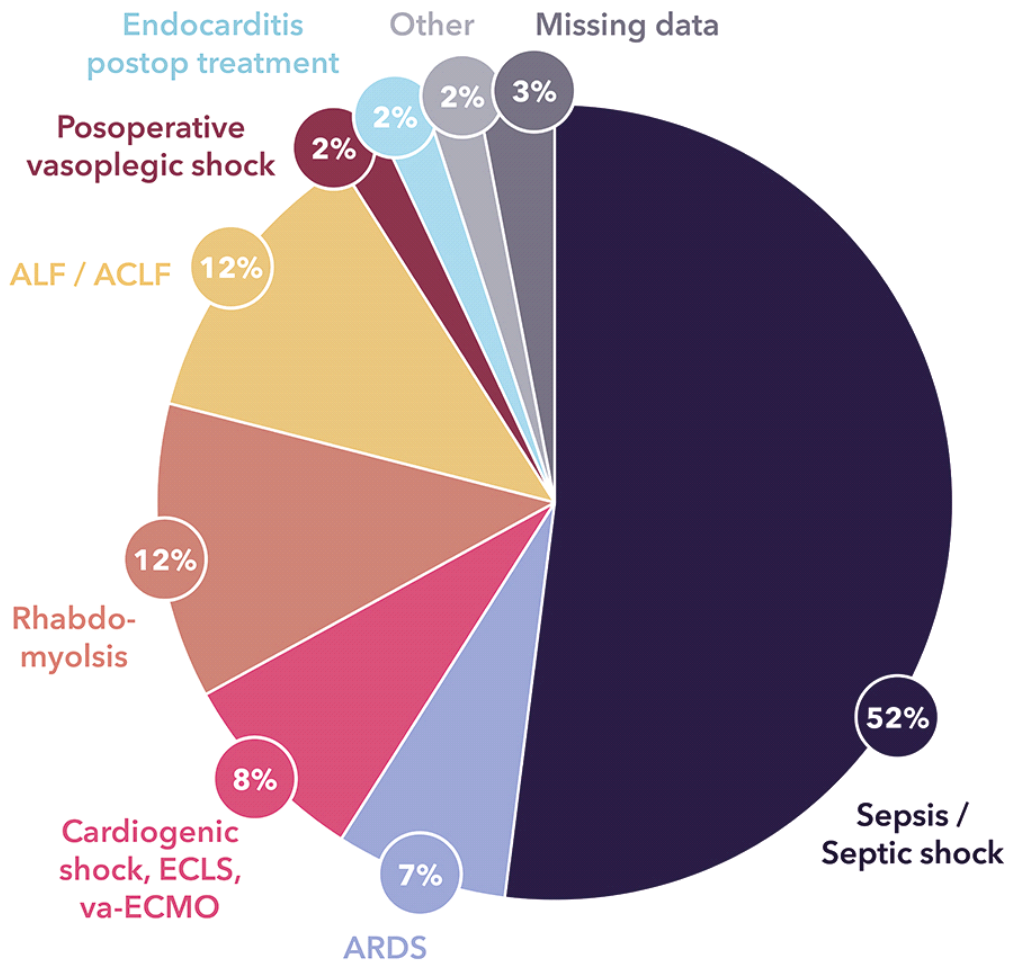


Figure 1. Number* and type of indications for CytoSorb® Therapy (* multiple indications may apply for certain patients)