A742 - Lactated Ringer versus Albumin in early sepsis therapy (RASP study): a randomized clinical trial

C Park ; F Galas ; J Fukushima ; R Nakamura ; G Oliveira ; J Almeida ; S Rizk ; L Hajjar
Cancer Institute of Sao Paulo, Intensive Care Unit, Sao Paulo, Brazil

Introduction:
Previous studies have suggested that albumin might be superior when compared to crystalloids in septic shock. However, it is not known if albumin in the first hours of hemodynamic resuscitation improves outcomes in septic shock patients. The aim of this study was to evaluate whether fluid therapy with albumin 4% solution as compared to crystalloid solution (lactated’s Ringer) decreases 7-day mortality in cancer patients with septic shock.

Methods:
The RASP study was a single-center, double-blind and randomized clinical trial. We randomly assigned 360 patients with cancer and septic shock to receive as resuscitation fluid in the first 12 hours of ICU admission bolus of 500ml of intravenous 4% albumin or lactated’s Ringer. The primary outcome was 7-day mortality. Secondary outcomes included ICU and hospital length of stay, 28-day mortality, daily SOFA score, rates of mechanical ventilation, renal replacement therapy and need of vasopressor drugs.

Results:
From 1168 eligible patients, 360 were included in the study – 180 in albumin group and 180 in the Ringer group. There were no significant differences between groups in demographic and baseline characteristics. The total amount of administered fluid in the first 12 hours of resuscitation was 2402±642 ml in the albumin group and 2296±629 ml in the Ringer group, P=0.114. The 12-hour fluid balance was 980 ml (428-1397) in the albumin group and 970 ml (240-1358) in the Ringer group, P=0.252. We did not observe any difference between groups in 7-day mortality rates (28.9% in albumin group and 22.2% in Ringer group, P=0.147). There was no difference in 28-day mortality in the groups (55.6% in albumin and 45.6% in the Ringer group, P=0.058). No significant differences in secondary outcomes were observed in the groups.

Conclusion:
In cancer patients with septic shock, resuscitation with albumin as compared to lactated Ringer did not improve the rate of survival at 7 days.