A208 - Differences in the impact of lactate levels and ScvO2 on the prognosis of septic patients requiring mechanical ventilation

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Introduction:
Serum lactic acid levels and ScvO2 are useful predictive parameters for patients with sepsis. However, little is known the differences in the impact of lactate levels and ScvO2 on the prognosis of septic patients. In this study, we investigated these differences by analysing septic patients’ characteristics and prognosis.

Methods:
This study is a post hoc analysis of data obtained from a multicentre, prospective, randomized controlled trial, which compared two fluid management strategies for septic patients requiring mechanical ventilation. We categorised patients into the following four groups: ScvO2 ≥ 70% and lactic acid levels < 2 mmol/L (HH group); ScvO2 ≤ 70% and lactic acid levels < 2 mmol/L (HL group); ScvO2 < 70% and lactic acid levels ≥ 2 mmol/L (LH group) and ScvO2 < 70% and lactic acid levels < 2 mmol/L (LL group). SOFA score, SAPS II score, lactic acid levels, ScvO2 and BNP were evaluated. Primary outcome was 28-day mortality, whereas secondary outcomes were the duration of mechanical ventilation, administration of CRRT, duration of catecholamine therapy and length of ICU stay.

Results:
In total, 104 patients were included: HH group (n = 32), HL group (n = 31), LH group (n = 25) and LL group (n = 16). No significant differences were observed in terms of patient characteristics. Further, 28-day mortality was 32% in the LH group, 28.1% in the HH group, 25% in the LL group and 13% in the HL group, and there was no significant difference in terms of mortality among the groups. Furthermore, there were no significant differences in terms of secondary outcomes. On multivariate analysis using the HL group as reference, the odds ratios for 28-day mortality in the LH, HH and LL groups were 1.21 (95%CI, 0.5-5.8), 1.62 (95%CI, 0.36-7.2) and 2.0 (95%CI, 0.37-10.9), respectively.

Conclusion:
Because 28-day mortality was higher in the HH group than in the LL group, serum lactic acid levels may have bigger impact on the prognosis of septic patients.