



Efficacy of an Extracorporeal Endotoxin Adsorber System during Hyperdynamic Porcine Endotoxemia

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Résumé en anglais	<p>Background: Endotoxemia is a crucial factor in the pathogenesis of sepsis. Elimination of endotoxin is aimed at the reduction of sepsis-related morbidity and lethality. The objective of this study was to examine the impact of an endotoxin adsorber on hemodynamics, O₂ exchange and metabolism during resuscitated porcine endotoxemia. Methods: Twenty pigs were randomized into 2 intervention groups (n = 7 each) and 1 control group (n = 6). Endotoxemia was induced by continuous intravenous application of lipopolysaccharide for 8 h. Adsorber therapy was started at the same time as the induction of endotoxemia or 2 h later. An extracorporeal hemoperfusion device using immobilized human serum albumin for endotoxin adsorption was used. Results: Hemodynamic, metabolic and acid-base parameters, as well as the kinetics of interleukin (IL)-6, IL-8, IL-10 and tumor necrosis factor-α, were characteristic for endotoxic shock. Endotoxin plasma levels were low (arterial, hepatic and portal vein). None of the parameters were significantly influenced by the adsorber system. Conclusion: Despite typical clinical signs of endotoxemia, the adsorber system had no significant effect on hemodynamic, metabolic and acid-base parameters during endotoxic shock. The reasons for the absence of an effect are elusive; however, failure of the method per se or exceeded capacity of the adsorber cannot be excluded.</p>
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