



## The risk associated with hyperoncotic colloids in patients with shock

Submitted by Emmanuel Lemoine on Fri, 07/18/2014 - 09:44

Titre	The risk associated with hyperoncotic colloids in patients with shock
Type de publication	Article de revue
Auteur	Schortgen, Frédérique [1], Girou, Emmanuelle [2], Deye, Nicolas [3], Brochard, Laurent [4], CRYCO Study Group, [5]
Editeur	Springer Verlag
Type	Article scientifique dans une revue à comité de lecture
Année	2008
Langue	Anglais
Date	2008/12/01
Numéro	12
Pagination	2157 - 2168
Volume	34
Titre de la revue	Intensive Care Medicine
ISSN	0342-4642 / 1432-1238
Mots-clés	Albumin [6], Anesthesiology [7], Colloids [8], Crystalloids [9], Emergency Medicine [10], Fluids resuscitation [11], Intensive / Critical Care Medicine [12], Pain Medicine [13], Pediatrics [14], Pneumology/Respiratory System [15], Renal failure [16]
Résumé en anglais	<p>Objective Crystalloids, artificial and natural colloids have been opposed as representing different strategies for shock resuscitation, but it may be relevant to distinguish fluids based on their oncotic characteristics. This study assessed the risk of renal adverse events in patients with shock resuscitated using hypooncotic colloids, artificial hyperoncotic colloids, hyperoncotic albumin or crystalloids, according to physician's choice. Participants and setting International prospective cohort study including 1,013 ICU patients needing fluid resuscitation for shock. Patients suffering from cirrhosis or receiving plasma were excluded. Measurements and results Influence of different types of colloids and crystalloids on the occurrence of renal events (twofold increase in creatinine or need for dialysis) and mortality was assessed using multivariate analyses and propensity score. Statistical adjustment was based on severity at the time of resuscitation, risks factor for renal failure, and on variables influencing physicians' preferences regarding fluids. A renal event occurred in 17% of patients. After adjustment on potential confounding factors and on propensity score for the use of hyperoncotic colloids, the use of artificial hyperoncotic colloids [OR: 2.48 (1.24-4.97)] and hyperoncotic albumin [OR: 5.99 (2.75-13.08)] was significantly associated with occurrence of renal event. Overall ICU mortality was 27.1%. The use of hyperoncotic albumin was associated with an increased risk of ICU death [OR: 2.79 (1.42-5.47)]. Conclusions This study suggests that harmful effects on renal function and outcome of hyperoncotic colloids may exist. Although an improper usage of these compounds and confounding factors cannot be ruled out, their use should be regarded with caution, especially because suitable alternatives exist.</p>

URL de la notice	<a href="http://okina.univ-angers.fr/publications/ua3586">http://okina.univ-angers.fr/publications/ua3586</a> [17]
DOI	10.1007/s00134-008-1225-2 [18]
Lien vers le document	<a href="http://dx.doi.org/10.1007/s00134-008-1225-2">http://dx.doi.org/10.1007/s00134-008-1225-2</a> [18]

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Publié sur *Okina* (<http://okina.univ-angers.fr>)