Letter to the Editor

A different view on human albumin

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With great interest we have read the article by Zhang for albumin substitution [9]. Far from being beneficial, the study documented an increased relative risk of death of more than 10% overall and up to 76% in subgroups [9,10].

As mentioned by Zhang and Frei, the maintenance of capillary permeability seems to be another physiological function of albumin [11]. In contrast to their paper, a more recent study by Margason and Soni did not confirm a reduction in capillary permeability in septic patients following infusion of human albumin [12].

A striking protection from neuronal injury during ischemia/reperfusion has been reported in models of stroke [13]. Careful review of the experimental design shows that bolus infusion of 25% human albumin was compared to equal volumes of 0.9% saline. The comparison of a hyperoncotic volume therapy with a low volume crystalloid regime results in important confounding effects on flow velocity and shear forces which will influence leukocyte adhesion directly apart from any specific anti-inflammatory effect [14]. In contrast, when human albumin was compared to another colloid in a clinical study on severe sepsis, volume resuscitation with human albumin was accompanied by increased plasma levels of soluble adhesion molecules and a worsened oxygenation index [15]. Manuscripts of basic research are not review papers and do not deal with therapeutic means. However, if the authors suggest “... increasing albumin levels may be an effective strategy to lower cardiovascular risk”, they should also discuss the possible negative aspects of doing so.

References


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