Reviewer's report

Title: Determination of Iron Sucrose (Venofer) or Iron Dextran (DexFerrum) removal by hemodialysis: An In-Vitro Study

Version: 2 Date: 5 November 2003

Reviewer: D Schneditz

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The authors H.J. Manley et al. present a revised version of their manuscript in which they addressed some issues raised in the review process. Unfortunately, some questions were only discussed in the replies to the review and remain to be clarified.

1) Page 4, line 7 from bottom: The reason for the high molecular weight of Venofer® remains unclear. Neither iron hydroxide nor sucrose have a high molecular weight. Thus, some additional information on the composition of this substance explaining its low dialysability would be helpful:

Venofer is a complex of polynuclear iron (III)-hydroxide in sucrose for intravenous use. Iron sucrose is also known as iron saccharate and described as polynuclear iron (III) hydroxide sucrose complex. Iron sucrose has a molecular weight of approximately 34,000 – 60,000 Daltons and a proposed structural formula: [Na2Fe5O8(OH)*3(H2O)]n*m(C12H22O11).

In the attempt to find more information on Venofer the following information was found at this website:

http://www.rxlist.com/cgi/generic2/venofer_cp.htm

“Venofer® is not dialyzable through CA210 (Baxter) High Efficiency or Fresenius F80A High Flux dialysis membranes. In in vitro studies, the amount of iron sucrose in the dialysate fluid was below the levels of detection of the assay (less than 2 parts per million).”

Is this information based on the results of the study presented in this manuscript? Have the results of the study already been published?

2) On page 8, line 7 from the bottom, please, replace the “100mg/mL/6000mL” by “100mg/6000mL”.

3) A point missed in the first review could be clarified (page 10, Tables 1 through 3). Clearance relating to removal of substance from the system is usually given as a positive value. The authors present removal as negative values and accumulation in the system as positive values. This may lead to confusion especially in the dialysis community and should be clarified (Tables 1, 2, and 3).

On page 10, Eq. 1, for clarification, add a note that removal from the tank is modeled as a negative rate constant Khd, whereas accumulation leads to a positive Khd, and that clearances will have corresponding signs.

What next?: Accept after minor compulsory revisions

Level of interest: An article of importance in its field
Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests: None