Reviewer’s report

Title: Validation of intraluminal and intraperitoneal microdialysis in ischemic small intestine - Clinical feasibility of equilibration dialysis.

Version: 1 Date: 29 May 2013

Reviewer: Erik Solligard

Reviewer’s report:

The role of the intestine in organ failure is an interesting field of research. To detect intestinal hypoperfusion is difficult, and the development of useful tools for monitoring the intestine is important. Microdialysis may be such a tool, and one question being asked for several years is should one monitor inside or outside of the intestinal lumen. The aim and background of the study comparing the luminal vs the serosal side of the intestine is relevant and appropriate. As they state, there are plentiful of experimental studies, but scarce with clinical studies.

But, I'm more reluctant to the second aim of the study, at least how it is presented in this manuscript; "a pilot material with peri- and post-operative monitoring of the intestinal region with equilibration dialysis".

Major Compulsory revisions

The equilibration dialysis part of the paper is interesting. The method is described earlier, and several studies has been performed. But in this paper this section is not well designed, nor well written.

The principle of the method is not described, the placement of the sacs are not possible to reproduce based on your description, and you do not describe the method of collection of the samples etc. The number of patients is small.

The study is not designed to answer your questions about the usefulness of this method in clinical monitoring.

My request is to take out this topic from the paper, redesign the study and publish as a separate paper.

Minor Essential Revisions

The total gut ischemia model ex vivo is not well described in the methods section. Please describe the surgical methods in brief, the handling of the intestinal specimen, placement of the probes etc. An illustration could do good. in the Microdialysis - ex vivo validation, you only describe the technical parts om the technique. What about recovery?

Discretionary revisions

Did you use the best ten minute fraction in each interval or did you make any mean values of the whole interval? Please describe.

Table 1; what is "n"? It is not readable.
Figure 2 is then not relevant.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

'I declare that I have no competing interests