Reviewer's report

Title: A prospective, randomized, controlled study of omega-3 fish oil fat emulsion-based parenteral nutrition for patients following surgical resection of gastric tumors

Version: 2
Date: 18 December 2013

Reviewer: Sigrun Friesecke

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The revision has improved the manuscript substantially.

There are some problems remaining:
1. the deprivation of early enteral feeding for the study patients. Early enteral feeding after elective and cancer gastrointestinal surgery reduces complication rate and duration of hospital stay (Bozzetti, Lancet 2001). So the authors may have deprived their patients of this advantage. I miss a justification for this management.

2. The simple change in indicated duration of antibiotics from version I to version II seems not convincing (first version 7 days, now changed to 3-4 days). There should be a trustable explanation for this difference.

Furthermore, duration of antibiotic prophylaxis does not exceed 24 h, otherwise it is therapy. If it is therapy, which infection is treated? Nosocomial infections are selected as an outcome parameter. Should we assume break through infections under ongoing antibiotic therapy? this should be clarified.

Minor essential revisions
Methods
- Nutrition: kJ/kg/d of calories.../ liquid instead of liquid support/
- The randomisation procedure should be explained in this section
- why a fixed ratio of insulin and glucose? metabolism and glucose tolerance is highly variable between patients.

Results
adverse effects of parenteral nutrition... my question did not adress different adverse effects of PN, instead I would like to know which of them you analysed to contend that there were no adverse effects. Please clarify. I´m sure, not only PNALD was analysed.

Discussion
section: “fish oil is made up ...” The pathophysiology is described much more detailed now. The effect of omega-3-fatty acids replacing omega-6-fatty acids, and being precursors of eicosanoids with less pro-inflammatory effects should be explained more clearly. There are still some important statements without any
release of antibodies and..of macrophages are ..enhanced."
"inhibiting the release of proinflammatory cytokines.."
"increases the release of antiinflammatory cytokines,"

"The mortality of patients was therefore decreased.." Which patients in which context?
I´m not sure what is meant with "...most likely due to the post-surgery nutritional status of the patients." Do you mean, the substitution of omega-3-fatty acids decreases creatinine? Why should this happen? the consideration regarding bilirubin is a totally different point and should explained in a new sentence.

**Quality of written English:** Needs some language corrections before being published

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

**Declaration of competing interests:**
I have no competing interests.