Reviewer’s report

Title: Effect of omega-3 fish oil fat emulsion contained parenteral nutrition on patients after surgical operation of gastrointestinal tumors

Version: 1 Date: 3 November 2013

Reviewer: Philip Calder

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This manuscript describes a study investigating intravenous fish oil in post surgical patients. This is an area of current interest. Compared with soybean oil, use of fish oil offered advantages with reduced inflammation and fewer complications.

Major compulsory revisions

1. The Introduction is inadequate. It does not provide sufficient background not provide a good rationale for doing the study. With the favourable meta-analyses of Chen and of Wei (both 2010) why are more studies necessary?
2. No data on fatty acid status are presented.
3. The Discussion is poor and does not put these findings in the context of the existing literature. What is new and what is confirmatory?
4. Abstract, lines 3 and 5. Need to link EPA and DHA to fish oil.
5. Abstract, lines 8 and 9. Are these tumours "gastrointestinal" or "gastric". Please clarify and be consistent.
6. Abstract - needs to state that control group received soybean oil.
7. Page 4, Patient selection, lines 5-6. What is meant by "Baseline studies ... at the time of hospital discharge after surgery"? Surely baseline data was collected before surgery??
8. If the study was randomised why are there different numbers of patients in each group?
9. Page 5, Nutrition, line 1-2. Delete "as shown in Table 2".
10. Page 5, Nutrition, line 7. What is meant by "sugar"?
11. Page 5, Nutrition, line 10. "any intake per oral" should read "any oral intake".
13. Page 7, General, line 1. Should read "no patients showed any severe complication or death".
14. Page 7, General, line 3. Delete "Baseline .... Table 1".
15. Page 8, line 5. Table 4 should read Table 2.
16. Page 8, section heading. Strictly speaking, authors did not assess "immunologic function". Rather percentage of some immune cell subsets was
measured. No functions are reported.

17. The language requires significant attention. There are numerous examples. Here are some of them but there are more:

a) in the title of the paper "contained" should read "containing" and "operation" should read "removal".

b) Abstract, line 1. has should read have.

c) Abstract, line 8. "of gi tumors" should read "for removal of gi tumors".

d) Abstract, line 9-10. Delete "in hospital".

e) Abstract, line 14. "the post-operative days" should read "postoperative day".

f) Abstract, line 18. Delete "incidence".

g) Abstract, 4 lines from bottom. Delete "takings".

h) Page 10 (twice). "eicosane" should read "eicosanoid".

Quality of written English: Not suitable for publication unless extensively edited

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

Declaration of competing interests:

I receive speaking fees from Fresenius-Kabi the producer of Omegaven, used in this study.