Reviewer's report

Title: Effects of abdominal hot compresses on indocyanine green elimination - a randomized cross over study in healthy subjects

Version: 1 Date: 22 December 2006

Reviewer: Daniel De Backer

Reviewer's report:

General
Although the procedure tested (application of hot compresses) was unknown to me and may be of modest interest for the average reader, I should congratulate the authors for having scientifically tested the hypothesis that this technique may or may not work.
The current protocol (2x2 cross over design) was adequately performed and the results analyzed using appropriate statistical tests. The analysis of 2 different decay curves allows to better differentiate the elimination processes that may have been affected by hot compresses.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
The study reports interesting findings, but the discussion needs to cover the potential limitations of the study:
1/ The authors used ICGPDR to evaluate liver blood flow and function. The major pitfall of this test is that it does not separate flow and function, and that opposite changes may be missed. As the study was performed in volunteers, it is unlikely that function was unaltered at baseline, but one cannot rule out that local heat impaired liver function so that an increase in liver blood flow may be missed. This is a technical issue that need to be discussed, but the conclusions will be the same on the usefulness of the intervention.
2/ More importantly, the PDR was normal at baseline. Is there any evidence, that PDR can further increase when blood flow is indeed further increased?
3/ One patient experienced an increase in bilirubin after 1st measurement. Was it a control or heat study? Please address this important issue in the discussion. How was this increase in bilirubin detected. Did you performed routine biological testing in these volunteers? If yes, these should be reported.
4/ Finally no sick patients were included, and the response may differ in patients compared to healthy volunteers. This study does not rule out a potential beneficial effect in patients with liver disease. This should be addressed in the discussion.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

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Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of limited interest

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