Author's response to reviews

Title: Small Bowel Enteroclysis with Magnetic Resonance Imaging and Computed Tomography in Patients with Failed and Uncertain Passage of a Patency Capsule

Authors:

Thomas Fork (thomas.fork@med.lu.se)
Nils Karlsson (nils.karlsson@gmail.com)
Sattar Kadhem (sattar1967@hotmail.com)
Bodil Ohlsson (bodil.ohlsson@med.lu.se)

Version: 3 Date: 17 November 2011

Author's response to reviews: see over
Dear editor and reviewer,

5649953425556285 - Small bowel enteroclysis with magnetic resonance imaging and computed tomography in patients with obscure delivery of patency capsule

Thank you once again for giving us the opportunity to improve our manuscript. We have answered all questions and made the corresponding corrections, highlighted in the running text. The text itself has been revised and put into British English. The title has been slightly changed at the language revision:

"Small Bowel Enteroclysis with Magnetic Resonance Imaging and Computed Tomography in Patients with Failed and Uncertain Passage of a Patency Capsule"

We hope that you will find the manuscript ready for publication.

Sincerely yours,

The authors through Thomas Fork
2011-11-17

Reviewer's report
Title: Small bowel enteroclysis with magnetic resonance imaging and computed tomography in patients with obscure delivery of patency capsule

Version: 2 Date: 16 October 2011
Reviewer: Johannes Heverhagen

Reviewer’s report:
Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Results
Magnetic Resonance Imaging (MRI) and Computed Tomography (CT)
Page 11: Please state why the quality of the radiological examinations was rated suboptimal in two patients.

Remaining issue: This was explained in the cover letter but not in the manuscript. Please add.

Answer. The following text is now added in the manuscript on page 12, highlighted in yellow: “The quality of radiological examinations was rated excellent in 64 cases, sufficient for diagnosis in four (three MRI- and one CT examinations) and suboptimal in two female patients, due to breathing artefacts in one and due to reflux of polyethylene glycol solution
into the stomach in the other, leaving too little behind for optimal distension of the terminal ileum. One woman had later second PC prior to a final VCE, the other was re-evaluated clinically with no further imaging study requested.”

Page 12: Sensitivity for Crohn’s disease was extremely low in this series. Only six out of 47 patients were correctly diagnosed in CT and MRI. What is the reason for this very low sensitivity? Did the authors only look for active disease? The authors should provide the criteria they used for the detection of Crohn’s disease in CT and MRI.

Answer: The reason for the low number of patients diagnosed with Crohn’s disease with either MRE or CTE in our series is not known, but has probably to do with image resolution. Erosions, typical for Crohn’s disease, are superficial and shallow; viz. lesions limited to the mucosa are not possible to unveil by these methods. However, the clinical value of modern enteroclysis examinations seems to be sufficient as few of the primarily intended VCE examinations were done. The true clinical value is still pending, but our follow-up of up to 24 months has yet not revealed any new disease, indicating the absence of false negative imaging studies. This comment is added in the Discussion, page 17, highlighted in yellow. Further, it seems as the clinicians refer patients to examinations, although there is only a weak suspicion of organic disease, explained on page 19: “As might be expected, normality of the imaging studies in patients with mild to moderate clinical symptoms, i.e. absence of alarm symptoms, may also be explained by the fact that many of these patients were admitted to examination although their laboratory analyses were close to normal.”

Remaining issue: The authors need to provide the criteria used for the diagnosis of Crohn’s disease.

Answer: This is described in the text, page 9-10 above, highlighted in yellow: “The enteroclyses were all re-classified and the following features were looked for: bowel wall thickness and masses, stenotic lesions, pre-stenotic dilatation, regional contrast enhancement of the mucous membrane and gut wall as compared to unaffected parts and nearby vessels, mucosal surface irregularities, mural and transmural involvement, fissures, engorged vessels and fibro-fatty proliferation of the mesentery and abnormalities of the peritoneum. Radiologic signs were summarized into three groups, those compatible with Crohn’s disease (as above), an alleged bleeding source, i.e. a tumour or an ulcer and miscellaneous findings such as adhesions, benign adenopathy, impaired peristalsis in an otherwise normal small bowel and other non-specific observations.

Video Capsule Enteroscopy (VCE)
In this paragraph, the authors compare the results of MRI and VCE. However, I am missing such a comparison for CT and VCE.

Answer: The paragraph is slightly rephrased as it actually describes the group of patients, both those who had had a MRI and those who had had CT, page 13, highlighted in yellow: “Out of 15 patients with clinically suspected Crohn’s disease, final VCE verified the disease in four. Only one of them had signs of Crohn’s disease on MRI, whilst three had normal
imaging studies. Two of these (one MRE and another with CTE), had jejunal erosions on VCE, so far not verified during the follow-up period. On the MRI examination 14 days earlier an increased number of normal mesenteric lymph nodes were reported, but no signs of inflammatory bowel disease and no such signs at a follow-up ileocolonoscopy examination four months later. VCE in the third patient, who had undergone a CTE, showed minimal changes in the duodenum and numerous erosions in the terminal ileum. A follow-up ileocolonoscopy performed two months later revealed tiny petechiae. Histology of biopsies from the terminal ileum revealed lymphatic hyperplasia only.”

Remaining issue: The authors state in their cover letter that only one patient had VCE and CT. That should explicitly stated in the text.

**Answer:** We would like to call the reviewers attention to the second half of the paragraph under the heading “Video capsule enteroscopy (VCE)”, page 13. It says: ” Hence, 20 VCEs were available for analysis in 15 of 44 patients previously investigated with MRI (34%), and five of 26 patients examined with CT (19%). “ Thus, 5 patients were examined by both CT and VCE, but only one showed a pathological changes suggesting Chron´s disease on the CT examination, stated in Table 2. It is also evident from page 18, Discussion, that 5 patients were referred to VCE after CT.