Author’s response to reviews

Title: Endoscopic ultrasound criteria to predict the need for intervention in pancreatic necrosis

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Author’s response to reviews: see over
To the editors of

BMC Gastroenterology

RE: Endoscopic ultrasound criteria to predict the need for intervention in pancreatic necrosis (BMC MS ID : 1782831784582745)

Dear Mr. Cardinez, dear Dr. O'Reilly,

thank you very much for the thorough and constructive reviewer comments and for offering us the opportunity to submit a revised version of the manuscript. We have addressed all reviewer concerns and hope the manuscript is now acceptable for publication in BMC Gastroenterology.

Please do not hesitate to contact us should you have any further requests,

Kind regards,

Christian Jürgensen, MD
Point by point revision

Chapter “Patients and methods”: The authors should add the used EUS Machines. (referee 1)
Done as suggested

The authors should characterize how they diagnosed “pancreatic necrosis” compared with localized pancreatitis, because this determination influences the results strongly. (referee 1)
Contrast-enhanced CT is the gold standard for the diagnosis of pancreatic necrosis (IAP and BSG Guidelines). Give details of CT findings; timing, extent of necrosis and preferably Balthazar score. (referee 2)

We agree that the definition of pancreatic necrosis is a central tool of this report and that misclassification would indeed impact strongly on the results. The morphological diagnosis of pancreatic necrosis was indeed primarily on EUS criteria in this report. Other imaging modalities such as CT were only used in the case of clinical doubt. There are two basic options for misclassification: Firstly, as the reviewer mentions, localized pancreatitis could be mistaken for necrosis: The differential diagnosis can however be easily made on the basis of tissue structure, continuous ductal structures and vascularization on Power Doppler investigation. We added a sentence explaining our approach to this differential diagnosis to the Methods section. The second principal differential diagnosis is pancreatic carcinoma, which also is vascularized, characterized by tissue invasion and metastases and would importantly have presented with a completely different clinical course during the long term follow up. In cases of doubt, EUS fine needle aspiration was performed. This information is also now in the manuscript. We thus do not think, that misclassification of pancreatic necrosis was at issue in this manuscript and had a measurable impact on the results.

Having said that, the reviewer is correct, in that there are as yet no published well defined EUS criteria from head-to-head comparisons to computed tomography for instance and the overall literature is scarce. We have added the respective literature to the section
describing our morphological criteria and added further explanations to the Methods. However, as the (albeit not extensive) literature demonstrates from a practical point of view – the diagnosis of pancreatic necrosis can be indeed made by EUS and this approach is now widely used in centers with the respective expertise, although systematic comparative studies would be desirable. The Figure presenting the different forms of pancreatic necrosis was also added with the intention of illustrating our morphological criteria.

Make an explicit statement of the primary end-point, i.e. “the primary end-point was…” (referee 2)
Done as suggested

Statistical analysis: explain further or reference the “glm () and lm() functions”. (referee 2)
Details were added as requested

Results: Table 1 could be much improved if it was presented as a trial profile, rather than presenting the raw data for each patient. (referee 2)
Done as suggested

Although 10 patients are said to reach the end-point, only 9 are accounted for in the text (3 endoscopic, 2 percut., 1 died with lung cancer, 1 with ileus, 2 had surgery = 9) (referee 2)
Done as suggested. Besides of 3 patients treated by endoscopic necrosectomy, there was a forth one just treated by EUS drainage as to be seen in table 1.

The timing of EUS is essential, as necrosis is a dynamic process. The number of days from disease onset to EUS should be specified. (referee 2)
Discussion: The issue of the timing of EUS should be addressed in the discussion, along with other limitations. (referee 2)
The inclusion of patients into the study was not based on the diagnosis of acute or chronic pancreatitis, but on the sometimes even incidental finding of pancreatic necrosis during upper gastrointestinal endosonography.
The conclusion that clinical presentation or CRP does not define the long-term clinical course is not valid. Your study of 31 patients is not powered to make this conclusion, and this statement should be deleted or qualified. (referee 2)

Done as suggested

Minor Essential Revisions referee 2

Page 7, 2nd line: add the word “open” before “surgery”. (referee 2)

Done as suggested

Page 7: Move the sentence beginning, “Fig 1 shows...” to the Methods section. (referee 2)

Done as suggested

P9, lines 7, 8, 9: Use “undrained” not “not drained”, insert “the” before “blood” and “immune”. Line 11: omit “has” before “led”. (referee 2)

Done as suggested