Reviewer’s report

Title: Is MRCP necessary to diagnose pancreas divisum?

Version: 0 Date: 31 Jan 2019

Reviewer: Davide Ippolito

Reviewer's report:

In the manuscript #BMIM-D-18-00270 the authors aim to compare the performance of three-dimensional magnetic resonance cholangiopancreatography (3D-MRCP) with non-MRCP T2 weighted sequences, namely a coronal inversion recovery sequence (TIRM) with 6 mm slice thickness and a transverse single shot turbo spin echo sequence (HASTE) with 4 mm slice thickness, for the diagnosis of pancreas divisum (PD).

One of the major limitations of the study is the lack of endoscopic retrograde cholangiopancreatography (ERCP) as the gold standard for the diagnosis of PD. The second limitation is absence of any 2D single shot breath-hold MRCP sequences, usually employed in a standard acquisition (being fast and sensitive in most of cases). These issues should be extensively commented in discussion sections. Moreover I think that the acquisition time and time sparing in the MRCP study should be highlighted to increase the strenght of manuscript. Further comment are specified below.

Abstract
Some English grammar errors.
Methods: I suggest to modify the word "fashion" with "manner"
Conclusions: Please modify "have" with "offer".

Keywords
1) ok
2) ok
3) please remove
4) ok
It would be better to add as keywords "TIRM" and "HASTE" sequences.

Introduction
Please revise English grammar.
Pleas spell out "ERCP".
Since your results focused on TIRM and HASTE sequence, it would be reasonable to add some information on these sequences justifying your choice.
Materials and methods
Imaging: please add the acquisition time of each sequence employed. Why the authors did not use also the 2D single-shot breath-hold MRCP sequences? It is well known that they are faster than 3D and in most of cases offer an higher sensitivity value in assessment of MPD. Please discuss it, also in Discussion section.
Why the authors did not use any oral contrast agent? Can this approach inficiate the final results? And in how many cases the negative contrast agent could improve the visual assessment of MPD? Page 9 Line 15. Please better describe which sequences were used as standard of reference. Did the authors used a combination of T2 weighted sequences, or T1weighted sequences. The written sentence create a sohort of confusion.

Imaging analysis (page 9, lines 1-3): please move the sentence in the statistical analysis section.
Why the authors did not use two independent readers in a blind manner, but used one reader in the first part of analysis and two in the second part. I think that the randomized analysis from two independent readers can improve the value of manuscript.

Statistical analysis: the diagnostic performance of each sequence (expressed as sensitivity and specificity) should be statistically compared with the more appropriate test.
Please spell out the name and city of the software you used to perform the statistical analysis.

Results
Please compare the results regarding the acquisition time of each sequence.
Please add the number of pathological findings on pancreatic parenchyma (i.e. cystic lesions; adenocarcinoma; pancreatitis, etc)
Page 11 Line 33 please add "alone" after TIRM
Page 11 Line 35 please add "alone" after HASTE.

Discussion
Please revise English grammar.
The authors should add comment and compare the results of previous published study using the same sequences.
Page 13, lines 37-47: since the author did not mention on these sequences, the sentence should be deleted or, alternatively, add a comment specifying why the author did not use theme.
A comment about the lack of 2D single-shot MRCP sequences should added.
A comment about the lack of negative oral contrast agent administration should be added.
Moreover to increase the value of manuscript I think that a mention about the time sparing in acquisition protocol should be added.
Conclusions: please rewrite in "Non-MRCP T2-weighted MR sequences, usually included on standard abdominal MR protocol, are non-inferior to 3D-MRCP alone in assessment of correct diagnosis of PD.

Reference Ok
Tables Ok
Figures Ok
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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