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ESPS Peer-review Report

Name of Journal: World Journal of Radiology

ESPS Manuscript NO: 9349

Title: Quantitative MRI of the Fetal Brain in utero: Methods and Applications

Reviewer code: 00685598

Science editor: Xiu-Xia Song

Date sent for review: 2014-02-10 10:23

Date reviewed: 2014-03-20 15:15

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A (Excellent)	<input checked="" type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B (Very good)	<input type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C (Good)	<input type="checkbox"/> Grade C: a great deal of language polishing	<input type="checkbox"/> No records	<input checked="" type="checkbox"/> Rejection
<input checked="" type="checkbox"/> Grade D (Fair)		BPG Search:	
<input type="checkbox"/> Grade E (Poor)	<input type="checkbox"/> Grade D: rejected	<input type="checkbox"/> Existed	<input type="checkbox"/> Minor revision
		<input type="checkbox"/> No records	<input type="checkbox"/> Major revision

COMMENTS TO AUTHORS

Summary: In the review “Quantitative MRI of the Fetal Brain in utero: Methods and Applications” Biegon et al. give an overview on imaging methods in the field of fetal MRI of the brain. Specific comments: The article is lacking a by far incomplete representation of the current literature and state of the art imaging methods; see for example: Thomason, M. E., Dassanayake, M. T., Shen, S., Katkuri, Y., Alexis, M., Anderson, A. L., Yeo, L., Mody, S., Hernandez-Andrade, E., Hassan, S. S., et al. (2013). Cross-Hemispheric Functional Connectivity in the Human Fetal Brain. *Sci. Transl. Med.* 5, 173ra24–173ra24. doi:10.1126/scitranslmed.3004978. D'Elia, A., Pighetti, M., Moccia, G., and Santangelo, N. (2001). Spontaneous motor activity in normal fetuses. *Early Hum. Dev.* 65, 139-147. Gowland, P., and Fulford, J. (2004). Initial experiences of performing fetal fMRI. *Exp. Neurol.* 190, Supplement 1, 22-27. Judas, M., Sedmak, G., and Kostovic, I. (2013). The significance of the subplate for evolution and developmental plasticity of the human brain. *Front. Hum. Neurosci.* 7, 423. Recently a lot of other reviews on similar topics have been published; see for example: Anderson, A. L., and Thomason, M. E. (2013). Functional plasticity before the cradle: A review of neural functional imaging in the human fetus. *Neurosci. Biobehav. Rev.* doi:10.1016/j.neubiorev.2013.03.013. Mailath-Pokorny, M., Kasprian, G., Mitter, C., Schöpf, V., Nemeč, U., and Prayer, D. (2012). Magnetic resonance methods in fetal neurology. *Semin. Fetal Neonatal Med.* 17, 278–84. doi:10.1016/j.siny.2012.06.002. Schöpf, V., Kasprian, G., and Prayer, D. (2011). Functional imaging in the fetus. *Top Magn Reson Imaging* 22, 113–118. Glenn, O.A., and Barkovich, A.J. (2006). Magnetic resonance imaging of the fetal brain and spine: an increasingly important tool in prenatal diagnosis, part 1. *AJNR Am. J. Neuroradiol.* 27, 1604-1611. I would suggest to change the focus of the



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submitted manuscript to offer a new perspective rather than trying to capture 'all modalities'. In my opinion a review should give an overview of a certain field and guide the reader through significant findings to point into future directions. Both these things are missing in this manuscript, therefore I suggest a rejection. Minor comments: Page 4, line 11: gestational instead of gestaetinal Page 6: I would recommend not to refer to DTI as information on regional connectivity.



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ESPS Peer-review Report

Name of Journal: World Journal of Radiology

ESPS Manuscript NO: 9349

Title: Quantitative MRI of the Fetal Brain in utero: Methods and Applications

Reviewer code: 00225349

Science editor: Xiu-Xia Song

Date sent for review: 2014-02-10 10:23

Date reviewed: 2014-03-21 01:10

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A (Excellent)	<input type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B (Very good)	<input type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C (Good)	<input type="checkbox"/> Grade C: a great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D (Fair)	<input type="checkbox"/> Grade D: rejected	BPG Search:	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)		<input type="checkbox"/> Existed	<input type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

COMMENTS TO AUTHORS

This is an interesting and concise review article on a topic highly relevant to this journal. Certain revision and editing work are needed, e.g. page numbers in the manuscript are missing.



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ESPS Peer-review Report

Name of Journal: World Journal of Radiology

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Title: Quantitative MRI of the Fetal Brain in utero: Methods and Applications

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Science editor: Xiu-Xia Song

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Date reviewed: 2014-04-09 10:37

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A (Excellent)	<input type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B (Very good)	<input checked="" type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input type="checkbox"/> High priority for publication
<input checked="" type="checkbox"/> Grade C (Good)	<input type="checkbox"/> Grade C: a great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
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<input type="checkbox"/> Grade E (Poor)	<input type="checkbox"/> Grade D: rejected	<input type="checkbox"/> Existed	<input checked="" type="checkbox"/> Minor revision
		<input type="checkbox"/> No records	<input type="checkbox"/> Major revision

COMMENTS TO AUTHORS

This paper presents a review of quantitative MRI studies of the fetal brain in utero. The first half of the paper is focused on reviewing studies of normal fetal brain development. Subtopics include regional and local patterns, cortical folding, water diffusion, regional connectivity, MRS and functional MRI. The second half reviews the studies fetal brain pathology, including fetal ventriculomegaly/hydrocephalus, congenital CMV infection, congenital heart disease, intrauterine growth restriction, ischemic stroke, and environmental toxicity. The paper is well-structured and clearly written. The following are a few comments which I hope can further improve the paper. * Page 4 and Page 5: "HU and colleagues" should read "Hu and colleagues". * Page 6, first paragraph: Words are missing before "of 22 normal fetuses ...". * Page 8: "empl0yed" should read "employed". * Page 8: Should "but there ADC values" read "but the ADC values"? * Page 8: Please spell out "CMV".