PEER-REVIEW REPORT

Name of journal: World Journal of Radiology

Manuscript NO: 45529

Title: Imaging plaque inflammation in asymptomatic cocaine addicted individuals with simultaneous PET/MR Imaging.

Reviewer's code: 00227565

Reviewer's country: Egypt

Science editor: Jin-Lei Wang

Date sent for review: 2019-02-18

Date reviewed: 2019-02-24

Review time: 15 Hours, 6 Days

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
[ ] Grade A: Excellent	[ ] Grade A: Priority publishing	[ ] Accept (High priority)	Peer-Review:
[ ] Grade B: Very good	[ ] Grade B: Minor language polishing	[ ] Accept (General priority)	[Y] Anonymous
[ ] Grade C: Good	[Y] Grade C: A great deal of language polishing	[ ] Minor revision	[ ] Onymous
[Y] Grade D: Fair	[ ] Grade D: Rejection	[Y] Major revision	Peer-reviewer's expertise on the topic of the manuscript:
[ ] Grade E: Do not publish		[ ] Rejection	[ ] Advanced
			[Y] General
			[ ] No expertise
			Conflicts-of-Interest:
			[ ] Yes
			[Y] No

SPECIFIC COMMENTS TO AUTHORS

Reviewer's Reply to the paper entitled: "Imaging plaque inflammation in asymptomatic cocaine addicted individuals with simultaneous PET/MR Imaging" Dear editor/ authors: Thanks for considering me to revise the above named manuscript. The authors

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aimed to quantify markers of early vascular disease of the atherosclerosis in individuals with cocaine use disorder (iCUD) via co-registration of the precise uptake of FDG in PET with high-resolution images of MRI. They compared the findings with two cohorts of non-cocaine users and high-risk persons for cardiovascular atherosclerotic disease. The study highlighted that inflammatory markers of atherosclerosis were detected in the carotid arteries of ICUD and necessitate paying attention for the treatment of cardiovascular disease in this group. The Methodology is sound yet the study sample is small to conclude a general statement. The results have to be displayed in a more interesting way for the practicing clinician who has no time to pass through all the data displayed. Moreover, from the sample and AUC analysis the use of PET-MRI for this purpose is just fair and doesn't rank as a good tool. The reviewer wonders why the authors did not use a more practical and cost-effective tool such as CE-US that would address neo-vascularity as a marker of inflammation, avoid the logistic difficulties of MRI and PET-MRI as well as radiation associated with the use of PET. Furthermore, it will be rapid avoid measuring the background noise and its elimination as the authors do for the PET. Also some confusion due to poor language has been aroused during my review. For instance, 1. In the methods section: this phrase is perplexing. It needs to be rephrased to be clear "Urine tests on screening day identified drug use (all subjects) and on the two study days pregnancy (women). Measures of alcohol (with an alcohol breathalyzer) and tobacco use (nicotine and Cotinine in blood) were obtained at screening visit)." 2. In the discussion section: this statement "However, because the FDG inflammation measures did not correlate with the MR measures of plaque burden (nor with cocaine withdrawal or craving symptoms), the FDG measure may not represent the progression of atherosclerosis (indeed it does not indicate the presence of plaque)." Makes the research of non-sense and get us back why you did not use a cost-effective and handy tool like US and CE-US. I recommend addressing these points, working more

on the organization, coherence of the work and meticulous English polishing of the manuscript to be palatable for the reader.   Good luck for the authors and much obliged for the editor

INITIAL REVIEW OF THE MANUSCRIPT

Google Search:

[   ] The same title

[   ] Duplicate publication

[   ] Plagiarism

[Y] No

BPG Search:

[   ] The same title

[   ] Duplicate publication

[   ] Plagiarism

[Y] No

PEER-REVIEW REPORT

Name of journal: World Journal of Radiology

Manuscript NO: 45529

Title: Imaging plaque inflammation in asymptomatic cocaine addicted individuals with simultaneous PET/MR Imaging.

Reviewer's code: 03366604

Reviewer's country: United States

Science editor: Jin-Lei Wang

Date sent for review: 2019-02-18

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Review time: 20 Hours, 9 Days

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
[ ] Grade A: Excellent	[ ] Grade A: Priority publishing	[ ] Accept (High priority)	Peer-Review:
[ ] Grade B: Very good	[Y] Grade B: Minor language polishing	[ ] Accept (General priority)	[Y] Anonymous
[Y] Grade C: Good	[ ] Grade C: A great deal of language polishing	[Y] Minor revision	[ ] Onymous
[ ] Grade D: Fair	[ ] Grade D: Rejection	[ ] Major revision	Peer-reviewer's expertise on the topic of the manuscript:
[ ] Grade E: Do not publish		[ ] Rejection	[ ] Advanced
			[Y] General
			[ ] No expertise
			Conflicts-of-Interest:
			[ ] Yes
			[Y] No

SPECIFIC COMMENTS TO AUTHORS

This manuscript describes an imaging study of carotid arteries in asymptomatic cocaine addicted subjects using simultaneous PET/MRI. PET was used to detect inflammation and MRI was used to evaluate plague burden including wall area and thickness.

Similar imaging tests were also conducted on controls and a cardiovascular risk group, and the results were compared. The study found that inflammation in most iCUD subjects and controls, and iCUD subjects showed greater plague burden. This paper is interesting, and provides potentially useful information. However, I have some concerns about some result findings and the difference in population composition between iCUD and the control groups. I have the following comments: 1) The paper reports that FDG-PET showed inflammation in most controls in this study. It suggests that the result may indicate the beginning of an atherosclerosis process in those subjects, but the paper has not explained why this happened to most of the controls and whether a similar result is expected for the general population. Besides, if the result represents the general population, then it seems that PET may not be effective/useful for this particular application. 2) Table 1 indicates that 13 of the 14 iCUD subjects were African-American. Though the Discussion explains the difficulty in recruiting controls who match the racial profile, it seems the difference in race can potentially create a bias in the results. The paper has not addressed this issue. 3) There is a big difference in nicotine usage between the iCUD and the control subjects. As mentioned in the Discussion, matching between groups on nicotine use could provide a better approximation of the vascular effects of cocaine usage. 4) On page 8, it is mentioned some PET and MRI indices were missing on some subjects. It is not clear to me to what the "indices" are referring. 5) The English writing needs editing to improve readability. Some sentences are hard to understand.

INITIAL REVIEW OF THE MANUSCRIPT

Google Search:

[   ] The same title

[   ] Duplicate publication

[   ] Plagiarism

[Y] No

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[   ] The same title

[   ] Duplicate publication

[   ] Plagiarism

[Y] No