

PEER-REVIEW REPORT

Name of journal: World Journal of Cardiology

Manuscript NO: 41450

Title: Safety and efficacy of frequency-domain optical coherence tomography in the evaluation and treatment of angiographically-intermediate coronary artery lesions

Reviewer's code: 03414056

Reviewer's country: Spain

Science editor: Xue-Jiao Wang

Date sent for review: 2018-08-14

Date reviewed: 2018-08-20

Review time: 6 Days

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

SPECIFIC COMMENTS TO AUTHORS

This paper entitled "Safety and efficacy of frequency-domain optical coherence tomography in the evaluation and treatment of angiographically-intermediate coronary artery lesions" attempted to assess the safety and efficacy of frequency-domain optical coherence tomography (FD-OCT) in the evaluation and treatment of



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angiographically-intermediate coronary lesions (ICL). The authors showed that doing FD-OCT is safe and effective in the evaluation and treatment of ICL with a short sample of patients. This is an interesting paper in the current context with an increased use of the new devices and strategies to evaluate ICL, the study lacks of some details in the analysis that could of importance, that I will mention through the review: 1. The introduction is well written. 2. A methodology section there is an important detail missing that is the power calculation or the sample size calculation, also minor details are 1) it's good to know how the follow up was performed (in person, by telephone...), 2) which was the minor bleeding definition in the secondary endpoint 3) how was unstable angina defined 3. The results are well presented 4. In the discussion section, the value of the results is clearly shown but I miss some referral to ORBITA substudies on the importance of medical therapy compared with ICP 5. The limitations section is clear but I found that some aspects could be included as the sample size is not calculated

INITIAL REVIEW OF THE MANUSCRIPT

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- ☐ No

BPG Search:

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- ☐ No

PEER-REVIEW REPORT

Name of journal: World Journal of Cardiology

Manuscript NO: 41450

Title: Safety and efficacy of frequency-domain optical coherence tomography in the evaluation and treatment of angiographically-intermediate coronary artery lesions

Reviewer's code: 03493974

Reviewer's country: Bulgaria

Science editor: Xue-Jiao Wang

Date sent for review: 2018-08-14

Date reviewed: 2018-08-20

Review time: 6 Days

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input checked="" type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
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			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

The manuscript presented by Khurwolah et al. touches an important topic in interventional cardiology. It is associated with the management of angiographically intermediate coronary lesions. Providing a tool for accurate assessment of those is of

great importance to the appropriate management of these “borderline” cases which are frequently under- or overtreated. In their study the authors show that using QCA leads to overestimation of lesion severity in comparison to FD-OCT. This is a prerequisite for overtreatment. On the other hand, the results show that OCT-guided decision making seems to be safe. The population with intermediate coronary lesions is largely underrepresented across different randomized trials. Therefore, despite the relatively small sample size this prospective single centre interventional study adds a lot of important data to the topic. However, there are some specific remarks that are worth mentioning: 1. The definition of the primary efficacy endpoint is somewhat vague. One usually expects to define a primary endpoint with the occurrence of some clinical event or a surrogate to assess important clinical events. This should be rethought and reworked before considering the manuscript again for publication. 2. Page 11, paragraph FD-OCT findings, line 5 needs some clarification. The text states the reference area derived from was smaller in the PCI group compared to OMT group while based on the results pointed out on Table 3 and cited in the text the reference area is not significantly different. 3. As the sample size is relatively small the results on safety endpoints in terms of MACE should be interpreted with great caution and stating that clearly in the text is highly recommended.

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PEER-REVIEW REPORT

Name of journal: World Journal of Cardiology

Manuscript NO: 41450

Title: Safety and efficacy of frequency-domain optical coherence tomography in the evaluation and treatment of angiographically-intermediate coronary artery lesions

Reviewer's code: 03702209

Reviewer's country: Greece

Science editor: Xue-Jiao Wang

Date sent for review: 2018-08-14

Date reviewed: 2018-08-23

Review time: 8 Days

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			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
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SPECIFIC COMMENTS TO AUTHORS

Criteria Checklist has been performed and were found relevant to the journal requirement 1. This is a very interesting study assessing the safety and efficacy of frequency-domain optical coherence tomography (FD-OCT) in the evaluation and



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treatment of angiographically-intermediate coronary lesions (ICL). The primary efficacy endpoint was to demonstrate the superiority and higher accuracy of FD-OCT compared to 2D-QCA in evaluating stenosis severity in patients with ICL. The primary safety endpoint was the incidence of 30-day major adverse cardiac events (MACE). Secondary endpoints included MACE at 12 months and other clinical events. 2. the present study is of significant value as it is the first one ever to investigate both the efficacy and safety of FD-OCT in evaluating and guiding the optimal treatment of patients with angiographically-borderline coronary artery lesions and also the superiority and higher accuracy of FD-OCT compared to 2D-QCA in evaluating stenosis severity in patients with ICL. 3. However, other safety endpoints such as duration of the procedure, fluoroscopy time, amount of contrast media used, and radiation dose delivered were not formally evaluated by our study. Also, the sample size was relatively small and it was a non-randomized study as the subjects were assigned to either arm based on specific predetermined OCT criteria. SMALL CORRECTIONS: 1. In the abstract section please make clear that the recurrent episodes of angina did not differ between the treatment groups 2. In page 4 (core tip):.....the benefits of this imaging modality over its procedural risks...: please add appropriate references 3. in table 5 please add p values, although the differences seem non significant

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