Author’s response to reviews

Title: Comparison of circulating dendritic cell and monocyte subsets at different stages of atherosclerosis: insights from optical coherence tomography

Authors:
Jianhui Zhuang (piscesjhz@sina.com)
Yang Han (674854067@qq.com)
Dachun Xu (xdc77@aliyun.com)
Guofu Zhu (zhuguofu_19880630@163.com)
Shekhar Singh (drshekharsingh@icloud.com)
Luoman Chen (sophialovechan@163.com)
Mengyun Zhu (zhumy73@aliyun.com)
Wei Chen (18917684083@189.cn)
Yawei Xu (xuyaweic@tongji.edu.cn)
Xiankai Li (lixiankai@tongji.edu.cn)

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Response to reviewers:
Kevin Woollard (Reviewer 1): Editor.

1. Kind of plaque and its impact should be evaluated (quote on PMID: 26508517)

Reply: This is a constructive suggestion. However, our study is cross-sectional in nature, we could only quote the literatures and discuss the effect of plaque characteristics on the prognosis of CAD.

On page 15,

In agreement with the previous meta-analysis, the prevalence of TCFA is markedly higher in ACS group than that in SAP group.28
Therefore, we applied OCT, which allows for the accurate assessment of plaque characteristics, to objectively identify the different stages of atherosclerosis. It should be noted that plaque rupture detected by OCT accounts for over 40% ACS, while the other ACS are caused by plaque erosion and calcified nodule. As compared with plaque rupture, plaque erosion and calcified nodule are more prevalent in fibrous plaque than those in lipid plaque and TCFA.31 Therefore, apart from vulnerable plaque characterized as TCFA, culprit plaque erosion and calcification pertain to fibrous plaque also contribute to the incidence of ACS. Additionally, TCFA alone is unable to correctly predict the adverse events in CAD patients. In contrast, TCFA combined with traditional risk factors is referred to be more feasible for evaluate the prognosis of CAD.28

References


2. Methodology: Did the authors exclude CD16+ NK cells and granulocytes from contaminating their monocyte subset gating?
3. How were monocyte counts assessed? 'blood routine examination' is a little vague

Reply: We should acknowledge that we did not clarify the procedure of blood routine examination in our study. Indeed, the absolute numbers and percentages of peripheral blood cells were evaluated by Coulter Automated Hematology Analyzer (Beckman Coulter, USA). The machinery was widely used in our clinical laboratory.

4. Figure 1: It would be helpful to change graphs to dot plots to show variability

Reply: As suggested, we now present the dot plots to show the homogeneity in each group.

Figure 1

5. Discussion: Last sentence on pg 17 should be removed. This cites a review and I do not think there is any compelling evidence from recent data that specific monocyte subsets can differentiate into "M1- or M2-type" macrophages only.

Reply: We agree with the reviewer and now remove this sentence.

6. Study limitations: last sentence does not make sense and should be re-written or removed.

Reply: As suggested, we now remove the last sentence.

6. Attention to English is needed throughout

Reply: As suggested, we now improve grammar and typesetting throughout the text.

Raffaele Capoano (Reviewer 2): The paper is fluent to read but the Authors should make some minor corrections.
Minor comments

Please, in the Abstract:

1) extend the acronym for OCT adding the full name in the first time that appears (paragraph "Methods")

Reply: As suggested, we now extend the acronym for OCT in the Methods section.

2) likewise write full Mon2 in the paragraph "Results"

Reply: The abbreviation “Mon2” has been rewritten.

3) write a brief sentence to describe the "control group"

Reply: We thank the critical suggestion from the reviewer. The definition of control group is now described in the Methods section.

On page 6,

Thirty-three subjects with possible cardiac etiology but free of luminal diameter narrowing ≥ 50% at coronary angiography served as controls.