Author's response to reviews

Title: Monocytes and neutrophils expressing myeloperoxidase occur in fibrous caps and thrombi in unstable coronary plaques

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Author's response to reviews:

Dear Editor-in-chief,

Enclosed please find the revised manuscript entitled “Monocytes and neutrophils expressing myeloperoxidase occur in fibrous caps and thrombi in unstable coronary plaques”.

We apologize for not including response to Reviewer 1 in the first revision. Changes are outlined below.

We appreciate the reviewer's comments and have made the changes in the revised form as outlined below. We hope the manuscript now meets approval for publication within BMC Cardiovascular Disorders.

Sincerely,

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Reviewer 1
COMMENT- This manuscript brings new interesting data that should help in the understanding of the possible mechanisms of plaque rupture. In order for the overall picture to be complete it appears that additional data concerning smooth muscle cell distribution and prototypic features in the different situation would be necessary.
We assume the reviewer meant “phenotypic” and not “prototypic”. We had performed studies on the subject, which are now included in the revised form of the paper. In the Methods, we added the sentence: “In selected plaques alpha smooth muscle actin (DAKO, Carpinteria, CA, clone M0851) was performed at 1:400 dilution”.

In the results section, we added: “Acute ruptures characterized by thin caps without actin positive cells, variable numbers of actin positive smooth muscle cells at the base of the plaque towards the internal elastic laminae (IEL). Healing ruptures, the rupture site characterized by fibrin, granulation tissue and none to few actin positive cells, again variable numbers of actin positive smooth muscle cells at the base of the plaque towards the IEL. In thin cap fibroatheromas, the cap itself contained no smooth muscle cells, but there were variable numbers of actin positive smooth muscle cells at the base of the plaque towards the IEL.”

Reviewer 2

COMMENT 1 – As ad#1 and 7, reviewer notes that literature background is adequately set, yet a more emphasized structuring (e.g. with numbering) of questions and purposes would be advisable, like: ‘…(1) to corroborate Sugiyama et al’s and Naruko’s finding…’ ‘… (2) to quantitate MPO positive cells…’ ‘… and (3) to correlate numbers of MPO positive cells in thrombi…’.

The last sentence of the Introduction was changed.

COMMENT 2 – Last sentence of Discussion states that this work ‘…brings new data to the discussion of the pathogenesis of atherosclerosis initiation.’ Instead of the word ‘initiation’, the reviewer feels the word ‘progression’ more appropriate and consistent with the message of this paper.

The word was changed to "progression".

Minor Essential Revisions

COMMENT 3 – As ad#2 & 3, methods’ statements are adequate in general, notification of sampled major coronary arteries would however be necessary, in acknowledgement that hemodynamic circumstances may differ between main coronary arteries.

We agree with this important remark and have included a new Table, now Table 1, with data on the sample of arterial segments and location of lesions.

COMMENT 4 – As ad#2 & 3, mentioning whether if any interventionary pretreatment on sampled coronary vessels had happened seems an important and interesting issue that is missing altogether from the text and would be appropriate to complete. Correspondingly, a comparison between pretreated and non-treated vessel alterations would equally be interesting to make.
We agree on the impact on the intervention on the presented data, but no cases included in the study had history of recent or remote intra-arterial intervention. This information was included in the Methods.

COMMENT 5 – Identification letters ‘A’, ‘B’, ‘C’ and ‘D’ are missing from photomicrographs of Fig 5.

We apologize for the oversight, the letters were included.

COMMENT 6 – It seems that value ‘7’ has been misplaced to Line 12 instead of Line 13, in Table 1, Column ‘Healing rupture’.

Yes, the number was corrected.

COMMENT 7 – For formal consistency with the other tables, it is recommended that Table 3 also contains division bars between table columns and lines.

The change was made.