Reviewer’s report

Title: In vitro and clinical studies examining the expression of osteopontin in cigarette smoke-exposed endothelial cells and cigarette smokers

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Reviewer: dimitris Tousoulis

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In the present study Bishop et al examined the mechanisms underlying the expression of osteopontin in human vascular endothelial cells in vitro following exposure to cigarette smoke particulate matter (PM) and determined if serum osteopontin levels changed in humans who quit smoking. They reported that in vitro cigarette smoke extract exposure induced osteopontin expression in human endothelial cells in an oxidative stress-dependent manner, which may involve MMP-3 cleavage. In humans, serum osteopontin was decreased with short-term smoking cessation.

In my opinion the data provided by Bishop et al are interesting. However, there are major points to be addressed by the authors.

Comments:
1. Abstract (especially results) needs modification. P values should be added while reported mechanisms should be avoided in the results.
2. Introduction/background needs shortening. Runs too long and many details such as those reported should be placed at the discussion section. The authors should focus on main concepts and aim of the present study. (Generally, the manuscript runs too long. The authors should try to minimize it)
3. Please replace SEM with SD where this is reported.
4. Methods section. It is preferable to be placed before the results section. That is also for the statistics section.
5. Did the authors perform any power calculations for their study?
6. The statistics performed in the present study are not fully understood. Please be more precise with that. (eg. Normality etc)
7. All p values should be added throughout the manuscript when differences or comparisons are reported.
8. Figures 5, 6 could be omitted and discussed only in the manuscript.
9. Study population is not fully clarified. What about inclusion/ exclusion criteria? Medication etc... these are details that are not fully clarified in the manuscript. Baseline characteristics of participants are not reported. What about dietary habits?
10. Why the authors choose to measure only osteopontin. Should be interesting to have data with other inflammatory markers and especially osteoprotegerin
Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

n/a