Reviewer's report

Title: Cytokine profiling reveals increased serum inflammatory cytokines in idiopathic choroidal neovascularization

Version: 1 Date: 04 Mar 2019

Reviewer: Anthony Mukwaya

Reviewer's report:

Comments to authors

Abstract

lines 24-26, I guess what the authors are referring to as the background is instead the objective of their study. If so, please revise accordingly.

Lines 30-32. I wonder if basic fibroblast growth factor, granulocyte-macrophage colony-stimulating factor and vascular endothelial growth factor, all fall under the classification of cytokines.

Background

Lines 61-66, authors state that the expression profile of inflammatory cytokines in AMD where shown to increase in advanced AMD. What is the difference in the pathophysiology between AMD and ICNV which motivates the authors to conduct the current study? If any, this should be spelt out clearly in their introduction.

Methods

Lines 77-79. Please state the number of patients recruited

Lines 77-79. What is the meaning of naïve ICNV? This is not mentioned anywhere in the background.

Lines 79-83. Why was it that only patients undergoing first-time ranibizumab treatment were considered in the study, and not any other treatment?

Lines 98-102. Why were 32 controls recruited into the study and not the same number as the patients in the study population?

Was age a factor for the recruitment of the controls? If so, please state clearly the cutoff age for inclusion.
How was "no evidence of active ocular or systemic disease" determined in the controls prior to recruitment into the study?

Lines 116. Clarify when each of the statistical tests were performed.

Results

Authors find a positive correlation between GM-CSF and CRT, however, the expression level of GM-CSF was not different between the patients and control (p value 0.394). Therefore, how reliable is the correlation analysis finding for this factor?

Discussion

Lines 149-154. Authors state that only a limited number of systemic cytokines have been assayed for in the past in ICNV, however, in the study they refer to by Yang et al. a total of 11 factors were investigated compared to the 7 assayed for here. Authors should therefore provide a better reason for conducting their study.

Conclusion

According to the findings of the authors, not both IL-17 and GM-CSF correlated with lesion size. Please clarify this text and be consistent throughout.

The conclusion that "ICNV may be associated with high levels of serum inflammatory cytokines" may be an over statement, given that only 2/7 (28%) of the analyzed factors showed a correlation of some sort with ICNV, and of the two factors, GM-CSF was not significantly different between the study population and the controls (p= 0.394).
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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