Reviewer’s report

Title: First case report of M1 macrophage polarization in an untreated symptomatic patient with toxoplasmosis

Version: 3 Date: 18 Dec 2017

Reviewer: Jason Mooney

Reviewer's report:

Here, the authors report the presence of M1 macrophage markers in a case report of human toxoplasmosis. Overall, the manuscript is concise and well written - with quality IHC. Topically, macrophage polarization in Toxoplasmosis well studied. IFNg driven activation of macrophages is important for host defence, with mice given IL-4 (M2 polarized) being more susceptible to infection. As the authors pointed out, these observations have been limited to animal models. Here, the authors use IHC on axillary LNs to evaluate pSTAT1 staining (alongside CD68/CD8/CD31) in one human patient - a true case report.

Comments:

1. Please clarify rationale for CD68 staining - as 'all macrophages express this' isn't a clear scientific fact that doesn't merit a reference. Yes, CD68 is a well-used histochemical marker but low levels have been found on other cell types (albeit low levels) which could impact the interpretation of this data set. The link of CD68/pSTAT1 co-staining needs to be solid to the reader. Essentially, the conclusion hinges on Figure 1C. Do you have control stained tissues to show alongside Figure 1C using your same protocol?

2. Can the authors better describe/reference methods (Line 85)? How many sections were screened? Can you insert the antibody clone in ()?

3. Was it possible to look at circulating IFNg in the patient, better describing TH1 polarization? Is this microenvironment specific?

4. The method of detection in the abstract is missing and should be added for clarity.

5. Reference text in line 44 is different than others.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.
No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.
No

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

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.
Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:
Acceptable

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None.

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