Reviewer’s report

Title: First Case of Primary Intraocular Natural Killer T-cell Lymphoma

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Reviewer: Janet Davis

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This is an interesting case report of a rare, possibly unique entity that is of interest to clinicians performing molecular diagnostics on vitreous specimens. It expands the knowledge base of intraocular lymphoma.

The narrative structure is straightforward, but not well written, due to language difficulties. This sentence is not comprehensible: "...a severe vitreous opacity with a small degree of cell infiltration was found....Retinitis...was unremarkable, with no evidence of vascular leakage or exudate in the retina caused by the vitreous opacity." Does this mean that there was vitreous haze out of proportion to cellularity? That there were no visible retinal lesions? That an angiogram was done that did not show vascular leakage? Why is this not referenced to photographs?

I would interpret Figure 1 a-c as showing both lesions and vascular leakage.

Other examples of poor word choice:

* "multiple disease lesions resembling lymphomas were found in the retina"

* "dry-and-wet type vitreous specimens"

* Which infections were tested by PCR? Please reference your previous published protocol.

* "histological examination of the retina indicated tumor was malignant". Malignant refers to clinical behavior. Was a retinal biopsy taken? It is not mentioned in the case report.

* The Background section states that NK-Tcell are CD3 negative (which is not correct I believe) but nonetheless there is no comment made later that this tumor was CD3 positive. In addition the gene rearrangement results are misstated: lack of TCR rearrangements doesn't mean that a cell is not a T lymphocyte, only that it is aberrant or that it does not have receptors.

In summary the case has merit and uses excellent diagnostic techniques but is presented in a way that detracts from its meaning. Rewriting and rethinking the case will need to be done if revised. A larger image of the montage retina would be more interesting to clinicians than the PET scan. Please include OCT of the lesions if they are available.

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.

Unable to assess

**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:

Not suitable for publication unless extensively edited

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