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Correspondence

Reply to Lee and colleagues—Viral posterior uveitis

Dear Author,

Ebola retinal lesions in this review¹ are described as “multiple, peripheral, chorioretinal scars with hypopigmented halos.” This description from Varkey and colleagues² was a single case report. In our recent case-control study, “A Novel Retinal Finding in Ebola Survivors, Sierra Leone 2016,”³ we were unable to find any retinal lesions of this description and appearance in 82 Ebola survivors and only 1 example in 105 controls using ultra-wide-field retinal imaging.

We did report a novel retinal lesion which appears specific to Ebola in 14.6% of survivors. It appears to have a peripapillary and/or isolated multifocal distribution following the anatomical pathway of the retinal ganglion cell axons implying a neuronal transmission to the retina. The lesions appear light gray in color, of variable size, with surrounding retinal darkening in many cases. Their shape is variable, but the presence of linear margins with sharp angulations in keeping with the photoreceptor triangular mosaic arrangement appears specific. Optical coherence tomography analysis demonstrates these lesions are limited to the retinal layers with no choroidal involvement. In all cases, we found they spare the fovea and therefore are not directly responsible for visual acuity deficits in the absence of intraocular inflammation.

As posterior uveitis secondary to Ebola has previously been based on case series,^{4,5} many retinal lesions seen in survivors may have falsely been attributed to Ebola when in fact they are common in the local West African population. Treatment for Ebola retinal lesions alone with periocular or systemic steroids may not be indicated or efficacious given the good visual outcome of Ebola survivors with multiple retinal lesions in the absence of cataract formation and may be detrimental in cases of inadvertent toxoplasmosis misdiagnosis which is a far more common cause of retinitis in West Africa.⁶

In the final paragraph, it is stated that one of the complications of posterior uveitis is recurrence of anterior uveitis. polymerase chain reaction confirmed anterior uveitis secondary to Ebola virus can occur in the convalescent period,²

but although reoccurrences have been reported up to 13 months by Hereth Hébert and colleagues,⁵ no aqueous humor polymerase chain reaction analysis was conducted to enable confirmation. As only 1 of the 9 figures in this publication were consistent with our description of Ebola retinal lesions, an alternative etiology for the uveitis recurrence is more likely.

Disclosures

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REFERENCES

1. Lee JH, Agarwal A, Mahendradas P, et al. Viral posterior uveitis. *Surv Ophthalmol.* 2017;62(4):404–45
2. Varkey JB, Shantha JG, Crozier I, et al. Persistence of Ebola virus in ocular fluid during convalescence. *N Engl J Med.* 2015;372(25):2423–7
3. Steptoe PJ, Scott JT, Baxter JM, et al. Novel retinal lesion in Ebola survivors, Sierra Leone, 2016. *Emerg Infect Dis.* 2017;23:1102–9
4. Shantha JG, Crozier I, Hayek BR, et al. Ophthalmic manifestations and causes of vision impairment in Ebola virus disease survivors in Monrovia, Liberia. *Ophthalmology.* 2017;124:170–7
5. Hereth He'bert E, Oury Bah M, E'tard JF, et al. Ocular complications in survivors of the Ebola outbreak in Guinea. *Am J Ophthalmol.* 2017;175:114–21
6. Ronday MJ, Stilma JS, Barbe RF, et al. Aetiology of uveitis in Sierra Leone, west Africa. *Br J Ophthalmol.* 1996;80(11):956–61

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