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Retinal detachment due to *Baylisascaris* "first time caught under the microscope!" - a rare case report

Nishant Verma^{*1}, Vinod Kumar², Kamla Kant¹, Bijay Ranjan Mirdha³

¹All India Institute of Medical Sciences; Microbiology

²All India Institute of Medical Sciences; Dr. Rajendra Prasad Centre for Ophthalmic Sciences

³All India Institute of Medical Sciences

Background: More than two dozen cases of ocular larva migrans (OLM) due to infection with *Baylisascaris procyonis* have been reported. Most of these cases have been reported from North America, with all except one presenting as diffuse unilateral subacute neuroretinitis (DUSN). In the present case, the patient presented with retinal detachment, which is more commonly a feature of *Toxocara* infection. In all the cases of *Baylisascaris* OLM, diagnosis was based on either the visualisation of characteristic large nematode larva on fundusoscopic examination and/or a positive serology. This is the first human case of *Baylisascaris* OLM where the larva could be recovered from the eye and the diagnosis was made based on the direct microscopic demonstration of the nematode. This is also the first human case of *Baylisascaris* infection reported from India.

Material/methods: A 45 year old male patient presented with sudden decrease in vision in his right eye. The patient was found to have total rhegmatogenous retinal detachment and multiple sieve-like breaks in the superior retina. A whitish, coiled worm was seen near the retinal breaks in the superior vitreous cavity. The patient underwent pars-plana vitrectomy, retinal re-attachment and the worm was removed in pieces. The pieces were microscopically examined and their sizes were estimated using micrometry.

Results: The total combined length of all the pieces of the larva that could be recovered from the specimen in saline was more than 1300 μm . The maximum diameter was approximately 58 μm and the minimum diameter was approximately 30 μm . Based on the observations, the larva was identified as that of *Baylisascaris* spp. We are under the process of further confirming the species using molecular techniques.

Conclusions: Baylisascariasis is a rare, but emerging zoonotic infection. Almost all cases have been reported from North America, and it's probably the first case of *Baylisascaris* OLM diagnosed outside the United States and Canada. OLM caused by *Baylisascaris* infection may present as DUSN, photophobia, retinitis, and/or blindness. Retinal detachment is a rare but serious complication. Many other nematodes like *Toxocara* spp. and *Angiostrongylus* spp. may cause similar clinical presentation, but, Baylisascariasis is a potentially more serious infection. Since treatment options are limited, early diagnosis and treatment are essential.