Published in final edited form as:

JAMA Ophthalmol. 2016 January ; 134(1): 105–106. doi:10.1001/jamaophthalmol.2015.2522.

Asymptomatic intraocular mass

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A 46-year-old healthy Hispanic male originating from Mexico was referred for evaluation of an asymptomatic posterior segment tumor in his left eye. The patient's corrected visual acuity was 20/20 in each eye. His pupils, intraocular pressures, motility, and confrontational visual fields were normal in each eye. Anterior slit lamp exam was normal in both eyes. Dilated fundus exam of the right eye was unremarkable, while examination of the left fundus revealed a lesion in the temporal periphery. Figure 1 shows a wide-field photo and ultrasonography of the lesion.

What is the most likely diagnosis?

1. Pars plana cyst
2. Retinal macrocyst
3. Subretinal gas
4. Intraocular cysticercosis

Working Diagnosis

Intraocular cysticercosis

Next step in management

Ultrasound biomicroscopy

The differential diagnosis for a posterior segment cyst includes cysticercosis, pars plana cyst, retinal macrocyst, subretinal gas, and degenerative retinoschisis. This particular lesion was much larger than a typical pars plana cyst and did not match the clinical characteristics of retinoschisis. With no history of prior vitreoretinal surgery, subretinal gas could not explain the finding. As the patient had previously lived in Mexico, he was at an elevated risk of exposure to *Taenia solium*. Further history revealed that his father had been diagnosed in the past with neurocysticercosis. In this particular case, additional imaging was critical in confirming the diagnosis. Ultrasound biomicroscopy of the lesion demonstrated a hyperechoic region within a hypoechoic cyst, suggestive of a cysticercosis scolex (see Figure

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Conflict of Interest Disclosures: None reported.

- 2). The patient underwent a systemic evaluation including a brain MRI, which was negative for evidence of systemic disease.

Discussion

Cysticercosis results from the larval form of the pork tapeworm *Taenia solium*. The ocular form of this condition is typically found unilaterally in a young patient.¹ While diagnosis has traditionally been based on clinical examination and ultrasonography, optical coherence tomography has recently been utilized to visualize a scolex.² As death of the larva may be associated with significant inflammation and ocular morbidity, some authors recommend early surgical intervention in all patients.³ Both transvitreal and transscleral surgical approaches have been described, depending on the location of the cyst.³ However, the management of a patient with asymptomatic intraocular cysticercosis without evidence of intraocular inflammation remains controversial. In this case, careful observation was recommended given the lack of inflammation and the patient's excellent visual acuity. However, he may likely require surgical intervention in the future.

Acknowledgments

Funding/Support: This work was supported by an unrestricted grant from Research to Prevent Blindness and core grant EY01792 from the National Eye Institute.

Role of the Sponsor: The funders had no role in the design and conduct of the study; collection, management, analysis, and interpretation of the data; preparation, review, or approval of the manuscript; and decision to submit the manuscript for publication.

The authors would like to thank Dr. Vikram Setlur for his expertise in ultrasound biomicroscopy.

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Figure 1.
A.) Widefield fundus photo and B.) ultrasonography of the left eye demonstrating a large cyst in the temporal peripheral retina.

Figure 2.
Ultrasound biomicroscopy of the cyst demonstrating a hyperechoic area within the hypoechoic cyst suggestive of a scolex.