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Starry Sky:Visual Threatening Asteroid Hyalosis in an Elderly Patient A Case Report

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Abstract

Asteroid hyalosis (AH) is a degenerative vitreous disease that is common among the elderly and was first described by Benson in 1894 [1]. It is characterized by a mild liquefaction of the vitreous body and a reduced likelihood of a posterior vitreous detachment (PVD)[2].58 year old male patient with gradual progressive loss of vision in Right eye associated with floaters. Patient didn't have any complaint in left eye. Hereby presenting a case report of patient with Unilateral asteroid hyalosis with visual threatening complication.

Keywords: Asteroid hyalosis,Vitreous.

Introduction

Asteroid hyalosis (AH) is characterized by yellow-white brilliant reflecting particles surrounded by tightly adherent fibrils inside the vitreous cavity.These particles are known as asteroid bodies (ABs) due to their resemblance to stars (asteroids) in the night sky. It is a benign vitreous opacification that does not generally need active intervention. However, accurate clinical diagnosis, the study of the associated ophthalmic and systemic features, pathogenesis, and biochemical composition of AH merit discussion.

Case presentation-

Patient

An 58-year-old man.

Chief complaint

Decreased vision and floater in the Right eye.

History of present illness

The patient came with history of gradual progressive loss of vision in Right eye since 1 year associated with floaters. It was painless, not associated with headache , redness ,watering, discharge or flashes of light. Patient had no previous history of trauma or any surgery, no history of a long term medication. Patient had diminution of vision in Left eye which was improved with spectacles. Right eye patient had no improvement in vision even with spectacles. the Department of Ophthalmology at Osaka Medical College Hospital, Takatsuki, Japan on October 15, 2014.

Past medical history

The patient was hypertensive.

Family history
No significant family history.

Findings on initial ocular examination
His initial examination of the Right eye showed that his BCVA was 6/18-6/9,left eye 6/9-6/6.Both eye near vision was N6. Both eye intraocular pressure was 14.0 mmHg. Both eye rest anterior segment was normal with early lens changes in both eye. On posterior segment examination Right eye suggestive of dense concentration of yellowish white round multiple star like bodies in vitreous suggestive of asteroid hyalosis, disc and vessel visualized normal, foveal reflex could not appreciate. Left eye fundus was had hard exudates with few flame shaped haemorrhage. An ultrasound B-mode examination right eye showed a shadow that appeared to be a cluster of concentrated asteroid bodies in the anterior vitreous cavity. Spectrum domain optical coherence tomography (SD-OCT) was attempted but the resulting images were blurred and indistinct.Patient was being reassured about the visual potential and advised for regular followup.
Patient was being advised for Complete blood count,Random blood sugar, Lipid profile.After 1 week patient lipid profile was deranged,as total cholesterol,triglyceride, and LDL cholesterol on higher side.Patient was advised for stict control of diet and regular followup.
Discussion
In general, the ABs have little effect on visual function, and it is rare to treat AH with vitreous surgery. The reason why the subjective symptoms such as decreased vision or floaters rarely occur in eyes with AH is that the density of ABs in the vitreous cavity is relatively low[4]. In addition, the ABs are present only in the vitreous gel and are not present in the liquid vitreous, Cloquet's canal, or posterior to a vitreous detachment[2].In our case patient had floaters and decreased vision in right only due to dense asteroid bodies in vitreous which was hampering his routine activities.OCT is quite useful for detecting the changes that cause the vision reduction in AH patients. Even when the fundus visibility is poor in eyes with AH, it is common for the fluorescein angiographic and OCT images to be clear[6,7].In our patient, clear SD-OCT images of the retina could not be obtained. We suggest that this was because the ABs were so concentrated in the anterior vitreous cavity near the nodal point that not enough light could pass through the ABs to form a sharp tomographic image.Thus, the concentrated ABs in the anterior vitreous were the more likely cause of the reduced vision
There have been several reports of AH cases in which the BCVA improved after vitreous surgery[8-10]. However, only a few of these studies reported on the exact cause of the reduced vision prior to the surgery. In our case we didn't intervene as patient was explained about visual patient post surgery .Still patient can be intervened in other cases if patient shows high interest of visual potential which might be hampering his routine or daily activities.

Conclusion
Asteroid hyalosis, named for resembling "stars in a night sky", is a benign degenerative ocular condition resulting in calcium, phosphate, and lipid deposits varying in size within the vitreous body[3]. Increasing age and male sex are the most significant risk factors for asteroid hyalosis[4]. Systemic comorbidities, such as diabetes, hyperlipidemia, and hypertension, have been reported to be associated with asteroid hyalosis[8]; however, when adjusted for age and sex, this association appears to lack significance, Ateroid

hyalosis does not need any intervention unless until it is threatening vision. Patient being advised for regular followup for ophthalmic intervention and control of blood pressure and lipid profile if needs.

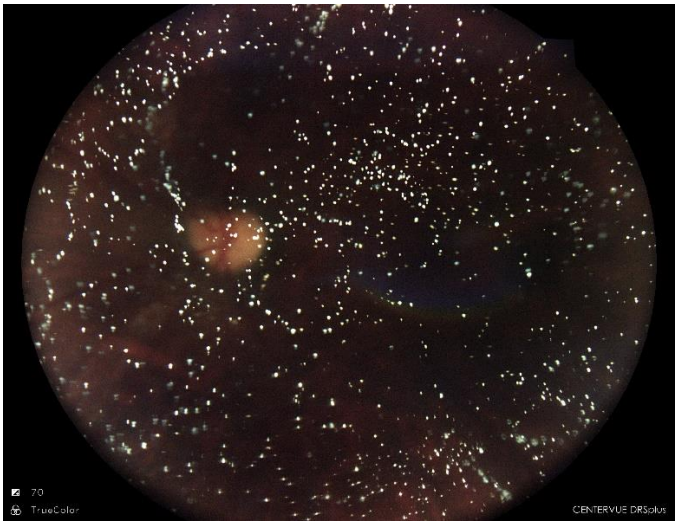

Fig 1:Right eye with ateroid hyalosis

Fig 2:Left eye with hard exudates and flame shaped haemorrhage

Abbreviation

Abs-Asteroid bodies
AH-Asteroid hyalosis
BCVA-Best-corrected visual acuity
SD-OCT-Spectral domain OCT

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