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Case Report

A Glittering Eye - A Rare Case Report

Priyanka Nangalia*, Monica Nayyar and Vaishali Mathur

DD Eye Institute, Kota, Rajasthan, India

***Corresponding Author:** Priyanka Nangalia, DD Eye Institute, Kota, Rajasthan, India.

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Abstract

Synchysis scintillans, or cholesterolosis bulbi, is a rare degenerative ocular condition characterized by the accumulation of cholesterol crystals in the vitreous humor of the eye. Cholesterol crystals appear as small, highly refractive opacities in the posterior chamber of the eye that freely move in a gravity-dependent manner, giving a snow globe-like effect There may also be anterior chamber involvement. While it is typically found in severely diseased eyes, synchysis scintillans is often an incidental asymptomatic finding. We report a case of a 65-year-old man with a history of left eye trauma and complete loss of vision, who presented for left eye discomfort. The slit lamp examination revealed crystals of synchysis scintillans and complete lens opacity. Total retinal detachment was observed on ocular ultrasonography. Intraocular pressure value was in normal range. The distinctiveness of this case is the mechanism of vitreous crystals mobilization into the anterior chamber through zonular weakness while intraocular pressure remains normal.

Keywords: Synchysis Scintillans; Eye Trauma; Anterior Cholesterolosis; Anterior Chamber

Introduction

Synchysis scintillans is a result of chronic vitreous hemorrhage and is formed of multiple vitreous opacities that are flat, mobile, and golden brown in color [1]. The condition is also known as "cholesterolosis bulbi", as the presence of cholesterol crystals was demonstrated in these opacities [2].

Synchysis scintillans is usually noted in the vitreous cavity, but there were reported cases of anterior chamber synchysis scintillans due to lens subluxation and anterior mobilization of the vitreous through the pupillary area [3,4]. We report a rare case of anterior chamber synchysis scintillans with dislocated position of the lens following eye trauma.

Case Report

A 65 year old patient presented to eye hospital with complain of discomfort in left eye. He gave a history of trauma to left eye 30 years back following which he had gradual, progressive complete loss of vision. He did not take any ocular treatment at the time of trauma. On examination, the right eye was pseudophakic with BCVA 6/6. The left eye had no light perception, slit lamp examination showed mature traumatic cataract with synchysis scintillans in anterior chamber probably as a result of chronic vitreous haemorrhage. The number and position of crystals located in anterior chamber varied with eye position and movements. Intraocular pressure in right eye and left eye was 14 and 12 mm Hg respectively. The fundus examination was within normal limit in right eye and no visibility due to media opacity in left eye. On B scan there was a retinal detachment in left eye. The patient was treated with combination of moxifloxacin 0.5%-dexamethasone 0.1% qid in left eye for a week to which patient was relieved of symptoms.

Discussion

While the majority of synchysis scintillans cases are observed in the vitreous, cases of anterior chamber involvement have sporadically been reported. Typically, anterior chamber

cholesterolosis occurs with prolonged visual impairment which is associated with ocular insults and underlying diseases such as traumatic cataract, lens subluxation, retinal detachment, or vitreous haemorrhage.

Several processes have been proposed to explain anterior chamber involvement in synchysis scintillans. Cholesterol crystals may enter directly from the vitreous via the pupillary space. Lens abnormalities such as aphakia and lens subluxation may also allow the particles to pass through the atrophied iris and degenerated suspensory ligament from the posterior to anterior chamber. Some patients present with cholesterol crystals only in the anterior chamber with a vitreous free of floaters. In these cases, it is possible that cholesterol crystals first form in the anterior chamber from proteins and fats that enter from the posterior chamber via intraocular fluid flow.

The retinal detachment itself can cause leakage of a cholesterol – rich fluid that contributes to formation of synchysis scintillans in the absence of any vitreous haemorrhage [5]. It is believed that cholesterol is released from the breakdown of intraocular red blood cells and then crystallizes. This may be secondary to trauma or protracted inflammation.

Since synchysis scintillans is considered a non-progressive and asymptomatic ocular condition, treatment is usually unnecessary. However, the condition may be the result of underlying ocular diseases such as chronic uveitis, vitreous hemorrhage, retinal detachment, raised intraocular pressure, or inflammation. These underlying conditions should be treated accordingly.

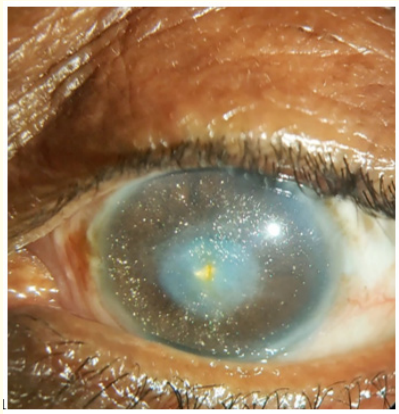

Figure 1

Video link

https://www.youtube.com/shorts/QsQohqdzccU

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