Case Report

An Aphakic Eye with Two Lenses (A Rare Case Report)

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Abstract :

Aphakia is a condition in which crystalline lens of eye is not present in its normal position of pupillary area. Here we present a case of 27 year old male with decrease in vision in the right eye. On examination it was found that patient is aphakia and on B- scan it was seen that patient was having two lenses in the vitreous.

Keywords

Aphakia, Close globe injury, Cataract, UBM, blunt trauma, Zonular dialysis.

Introduction

Aphakia means 'absence of lens '. Lens is the clear, oval shaped structure behind the iris in pupillary area which converges light to give us vision. [1]

Most common causes of aphakia are;

- Cataract surgery
- Injury/trauma
- Congenital defect

Case Report

A 27year old male with chief complaint of decreased vision in the right eye presented in the eye opd of GMCRH. Patiala, Punjab, India on 30/7/2020. As per the history given by the patient , 7 years ago, he had blunt trauma in his right eye while he was working in press factory. The patient was treated in a local hospital for his peri-ocular wounds and eyelid repair was done. It was a close globe injury. After one and a half year of injury, patient complained of decrease in vision in right eye which was gradual and progressive. Patient visited a local hospital where he was operated for cataract in right eye with IOL Implantation. But after the surgery , there was no improvement in the vision of the patient right from post-op day one. Now the patient came to GMCRH. Patiala, Punjab, India with complaint of decreased vision , intermittent watering and lid swelling in the right eye.

On Slit Lamp Examination, the following finding was there;

- Cornea was hazy.
- Angle was very narrow.
- Iris was adherent to cornea in periphery.
- Pupil was jet black, only two purkinje images seen.

The patient was advised B- scan for his right eye on 30/7/2021.

B - scan finding

- There is an anechoic structure simulating intraocular lens measuring 8*8 mm, seen in the vitreous chamber suggestive of dislocated intraocular lens.
- There is also another anechoic cystic structure measuring 7.2*6.2 mm in the vitreous chamber suggestive of foreign body (crystalline lens).
- There is also a detached membrane observed with V-shaped configuration suggestive of retinal detachment.

Discussion

In the cases of closed globe injuries and blunt ocular trauma, there are four phases of deformation

of globe. [2] These are compression, decompression, overshoot and oscillation. Due to blunt force, there is decrease in Anterior- Posterior diameter of globe and increase in equatorial diameter which causes stretching of circumferential tissues of eye. Inner structures of eye gets damaged as fluid within the eyes cannot be compressed. [3]

The most commonly affected tissue are-

1) Sphincter Pupillary muscle injury – resulting traumatic mydriasis or distorted pupil.
2) Iris base/ Root injury – causing iridodialysis.
3) Anterior ciliary body trauma – resulting angle recession with marked posterior displacement of iris root and widening of ciliary body band.
4) Separation of ciliary body attachment from scleral spur resulting in cyclodialysis and exposing the internal scleral wall. [4]
5) Trabecular meshwork scar or injury.
6) Zonular dialysis resulting in subluxation or dislocation of crystalline lens.[5, 6]
7) Retinal dialysis that is disinsertion of retina at ora serrate.

So, the most common long term complications after blunt trauma are glaucoma and cataract.

Conclusion

In this case , patient has two lenses in vitreous, 1) natural cataractous lens 2) Intra ocular lens but the patient is still aphakic as no lens is present in pupillary area.

- Carry home message :If the zonular dialysis had been diagnosed before surgery, then lens drop and intraocular lens drop could have been prevented by referring patient to a centre where scleral fixated/ iris claw/AC-IOL could be implanted.

- UBM. i.e. Ultrasound Bio microscopy is an effective non invasive procedure which should be done in all traumatic patients with history of closed globe injury and blunt trauma, pre- operatively to detect the zonular dialysis and other complications of the angle. [7]

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