Original Research Paper

Volume - 10 | Issue - 10 | October - 2020 | PRINT ISSN No. 2249 - 555X | DOI : 10.36106/ijar

Ophthalmology

PAEDIATRIC CATARACT OF AN UNUSUAL MORPHOLOGY: A CASE REPORT

Dr Varsha G. Bapat* M.S.Ophthalmology F.R.C.S.Ed Ophthalmology Consultant Ophthalmologist Neo Eye Clinic And Hospital Pune. *Corresponding Author

Dr. Rashmi N. Pathak M.S.Ophthalmology Consultant Ophthalmologist , Neo Eye Clinic And Hospital Pune

ABSTRACT Morphology of paediatric cataract can give a clue to the aetiology, age of onset and in some cases can affect the visual prognosis. In this case report we have an unusual morphological presentation of developmental cataract in a six year old female without any other associated systemic or ocular abnormalities. She responded very well to the treatment by cataract removal with intra ocular lens implantation .

KEYWORDS : Paediatric Cataract, Morphology

INTRODUCTION

Bilateral congenital cataracts are often characterised by morphology, aetiology and related conditions.[1] Congenital cataracts account for 1 out of every 2000 live births. Morphologically cataracts may be classified into fibre based and non fibre based. These include anterior or posterior polar cataracts, lamellar, nuclear or catracta centralis pulverulenta ,sutural or stellate ,floriform ,coralliform ,blue dot, coronary ,subcapsular, total white, disciform ,oil droplet' spear and membranous .The commonest morphological forms being lamellar and hereditary remains the most common aetiology of congenital cataracts.[2]

The spectrum of morphological variation is enormous and complex although a comprehensive approach is to classify the variation according to the area of lens involved and detailing the description of shape and appearance .Each specific type is helpful in determining the aetiology, visual prognosis and management. Thus morphology of congenital cataract reflects combination of timing and nature of cause , anatomy of the lens including its capsule .[3]

Case Report

A six year old female patient came to our eye out patient department with complaints of reduced vision in both eyes which was gradual in onset, painless and progressive. She also seemed to be troubled with glare. There was no positive history for any systemic or ocular diseases. She had no history of trauma, ocular surgery or long term ocular or systemic medications or illnesses. There was no significant family history however on slit lamp

examination of her mother showed less severe peripheral and morphologically similar lens opacities although not visually significant. Rest of her family members had no ocular abnormality detected.

On examination her visual acuity was finger counting one foot in both eyes. She had good fixation and normal pursuit movements. Intraocular ocular pressure was fourteen in each eye with non contact tonometer. Slit lamp examination revealed clear cornea, deep anterior chamber , normal pupils and normal pupil reflexes . The crystalline lens showed opacities in an unusual morphological pattern in both eyes.(fig. 1).

The opacities were situated in the nucleus as tiny round well circumscribed white balls appeared as cluster of sago grains.(fig. 1). The right eye had more opacities than left eye. The cortex was comparatively clear. Fundoscopy in both eyes with indirect ophthalmoscope showed no gross abnormality although the view was hazy on direct ophthalmoscope.Keratometry and A scan was performed and the readings were incorporated to obtain intraocular lens power.

A Paediatric specialist referral was done which suggested normal development and no systemic abnormalities. Routine blood and urine investigations were reported to be normal.

A biochemical and histo-pathological analysis of removed lens opacities were inconclusive as the sample size was too tiny and insufficient for any analysis, and no specific collection and mounting techniques were known for such samples.

Both eyes were operated at suitable intervals for cataract removal by irrigation and aspiration and foldable intraocular lens implantation. Intra operative and post operative period was uneventful. Both eyes responded well to the treatment and achieved visual acuities of 6/12 unaided each eye.(Fig.2)

DISCUSSION

cataracts are an important Congenital and developmental cause of visual impairment in children .[4] Most bilateral congenital cataracts, whether familial or sporadic, consist of nuclear opacities. Many of these nuclear opacities are dense at birth and require early surgery, while others are progressive.[5] Several phenotypically unique morphologic variants have been previously described, and are easily recognizable by the examining ophthalmologist. Examples include the ceruleancataract,[6] the pulverulant and/or zonular type congenital cataracts (Coppock-type),[7] the aculeiform cataract ,and the coralliform cataract . Most of these cataracts consist of whitish appearing opacities, and lens changes that appear "crystalline" are uncommon.

In our patient the whitish opacities seemed to be in the nucleus and peculiar in morphology The morphology of cataract is important for several reasons ,it can give a clue to the age of onset, to the visual prognosis, it may suggest heritability, and it may give a clue to the aetiology. Some morphological types have a better visual prognosis than others, with lamellar cataracts and posterior lenticonus doing well and dense central cataracts relatively poorly.

To learn more about developmental process and their disease causing disturbances appropriate animal models are helpful for research study They reflect mainly genetically caused developmental alteration in the lens and surrounding ocular tissue from a genetic point of view. It becomes obvious that cataract causing mutations are not distributed randomly. It can affect the altogether development of eye and present as a complex syndrome involving various structures of the eye along with cataract.[8]

CONCLUSION

Congenital cataract is a rare but serious occurrence. The morphological variant may help in correct diagnosis of underlying cause however in our report the unusual morphology was an isolated presentation and did not have any associated significant features suggestive of any underlying pathology or syndrome. Irrespective of the etiological pathogenesis, the management by cataract removal and an artificial intraocular lens implantation remains as standard. Our patient responded well and achieved good and stable vision.

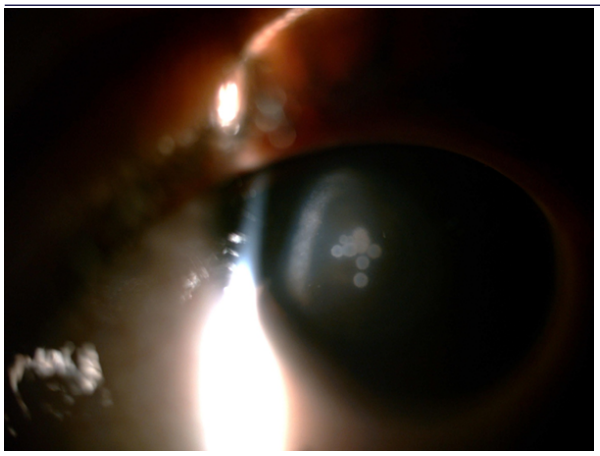

Fig. 1 pre operative

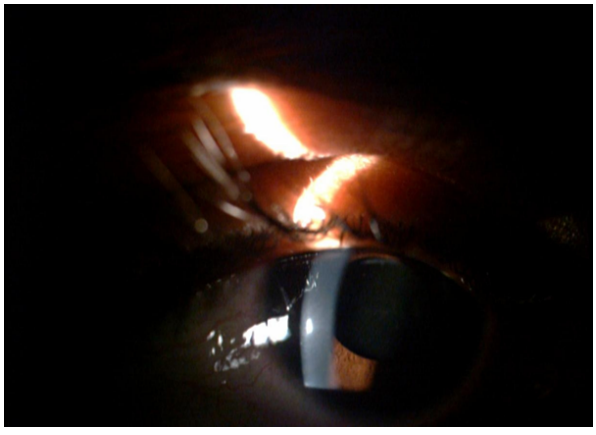

Fig. 2 post operative

REFERENCES.

1. Triangular congenital cataract morphology associated with prenatal methamphetamine exposure, Michael E Clark,Susan Schloff, journal of AAPOS,2009 13(4):405-409)
2. Aust J Ohthalmol 1982 10:237-242) (J.paediatric ophthalmolstrabismus 1983 Nov-Dec,20(6):238-242 Jain S Pillay P)
3. (survey of ophthalmology vol 48 issue 2 125-144 march-april 2003 David taylor ken nischal)
4. Foster A, Gilbert C, Rahi J. Epidemiology of cataract in childhood: a global prospective. J Cataract Refract Surg 1997;23:601-4. [PMID: 9278811]
5. Zetterström C, Lundvall A, Kugelberg M. Cataracts in children.J Cataract Refract Surg 2005; 31:824-40. [PMID: 15899463]
6. Vogt A. Die spezifitat auder borener und erworbener starformer fur die einzelnen linsenzouene. Albrecht Von Graefes Arch Clin Exp Ophth 1922; 108:219-28.
7. Nettleship E, Ogilvie FM. A peculiar form of hereditary congenital cataract. Trans Ophthalmol Soc U K 1906;26:191-206.
8. Kirk N.Gelatte ,Noveen D Das Animal models for inherited cataracts: a review.1984, Vol. 3, No. 5 , Pages 765-778