



EARLY INTERVENTION IN CONGENITAL CATARACT: A CASE REPORT ON TIMELY DIAGNOSIS AND MULTIDISCIPLINARY MANAGEMENT.

Ophthalmology

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ABSTRACT

Congenital cataract is a rare but significant cause of childhood blindness, with a prevalence of 0.6–9.3 per 10,000 live births. Delayed diagnosis and treatment can lead to irreversible deprivation amblyopia and permanent visual impairment. A 7-week-old female infant presented with bilateral white reflex since birth, accompanied by poor auditory response. Ocular examination revealed dense lens opacities and white pupillary reflexes. A TORCH panel at birth was positive for Rubella IgG, CMV IgG, and HSV 1 & 2, with a maternal history of fever in the first trimester. The child underwent bilateral lens aspiration, posterior curvilinear capsulorrhexis, and anterior vitrectomy under general anesthesia. Postoperatively, she was prescribed antibiotic and steroid eye drops, followed by spectacle correction. Early surgical intervention in congenital cataracts is crucial for optimal visual development. Multidisciplinary evaluation is essential to identify underlying infections or syndromes, ensuring comprehensive management. Long-term follow-up is necessary to optimize visual outcomes and prevent amblyopia.

KEYWORDS

Congenital cataract, rubella infection, TORCH panel, amblyopia prevention, multidisciplinary management.

INTRODUCTION:

Congenital cataract is a rare eye disease, with a variable prevalence of 0.6–9.3/10,000 live births. (1) Approximately 1.26 million children worldwide are affected by blindness, with nearly two-thirds residing in developing nations. (2) Congenital cataract is a preventable cause of blindness, but delayed diagnosis and treatment can result in irreversible deprivation amblyopia, leading to severe and permanent visual impairment or blindness. (1) According to the World Health Organization, this figure is approximately 8 per 10,000 children in India. (2) Congenital cataract management is distinct from routine age-related cataract treatment. While adults can often postpone surgery for years without affecting their vision, infants who don't undergo cataract removal within the first year of life may never achieve full vision recovery, even with subsequent surgery. (3)

CASE REPORT:

A 7week old female baby presented with parents noticing white reflex in eyes. The patient's mother noticed that her child had whitish discoloration in both her eyes since the time of birth, which was more predominant in the right eye than in the left eye. She also complained of an unsatisfactory response to calls and claps. Mother consulted a paediatrician for the same and was advised ophthalmology opinion. Upon general physical examination the baby was conscious, moderately built, nourished and afebrile. On torch light ocular examination erect head posture, symmetrical face with an orthophoric gaze. The visual acuity and ocular movement could not be assessed. On Retinoscopy – RE no glow; LE – dull glow. Pupillary examination revealed a white reflex in both eyes. Dense white opacification of lens with clear zone nasally and inferiorly was noted in both eyes. The intra ocular pressure was digitally soft in both eyes. Fundus could not be visualized due to lenticular opacity. The B Scan was well within normal limits. The mother gave history of presence of ECHO suggestive of 5 mm OS atrial septal defect with left to right shunt in the child. An umbilical hernia was present at birth. A torch panel was carried out at birth which showed a positive result for Rubella IgG 58.5, CMV IgG > 250 and HSV 1 and 2: +16.0. There was a positive history of fever to mother in 1st trimester. The patient underwent haemogram blood work as well as a pediatric examination to evaluate the etiology and seek for any associated conditions. The preoperative lens power calculations were performed under sedation. The child was scheduled to undergo bilateral eye lens aspiration and posterior curvilinear continuous capsulorrhexis <6 mm + anterior vitrectomy under general anesthesia. Cataract surgery via a 2.8 mm clear corneal incision was performed. Postoperatively, the patient started treatment with gatifloxacin 0.3 % + prednisolone 1 % 1 drop BE 6 times/day, and G. Homatropine 2 % 1 drop BE 3 times/day. At the month follow based on retinoscopic evaluation, the child was prescribed spectacle

correction of + 16.0 D.

DISCUSSION

An approach to assessment of children with cataract includes obtaining a history of the pregnancy and birth, with a focus on enquiring about maternal illness, drugs and medications in pregnancy along with post natal history. (4) Multidisciplinary management is essential to ensure full investigation and appropriate care pathways are established with paediatricians' input, to exclude metabolic disorders, congenital infections and other syndromes. In our case extended evaluation for the rubella was sought. (5) Rubella is the most common congenital infection causing cataract worldwide. (6) In a study conducted by J Malathi et al 10% of patients with congenital cataract were due to rubella infection. (7) Maternal rubella infection during pregnancy puts the foetus at risk of developing a clinical rubella syndrome comprising a triad of deafness, cataract and cardiac disease. (8) The management of cataract presenting in children is more complicated than that of adult patients. Primarily the risks of performing early surgery need to be balanced with facilitating the best possible visual development in children during an amblyogenic period. (9) According to a study by Solebo AL et al 'IoLunder2' observational cohort study, which reported no visual benefit with implantation for children with bilateral or unilateral congenital or infantile cataract undergoing surgery in the first 2 years of life. (10) Rigorous post-operative care in children and regular follow up are essential for good longterm visual outcomes

CONCLUSION

Congenital cataract is a widely phenotypic heterogeneous disease with genetic and environmental causes to consider. Surgical management is the mainstay treatment for the cataract itself, but the clinical challenge is finding the cause. Primary posterior capsulotomy and anterior vitrectomy are essential in the younger age group. Early aggressive management of pediatric cataract is necessary for good visual prognosis thus preventing amblyopia and its complications.



Figure 1: Torch light examination of the right eye with cataract



Figure 2: Torch light examination of the Left eye with cataract

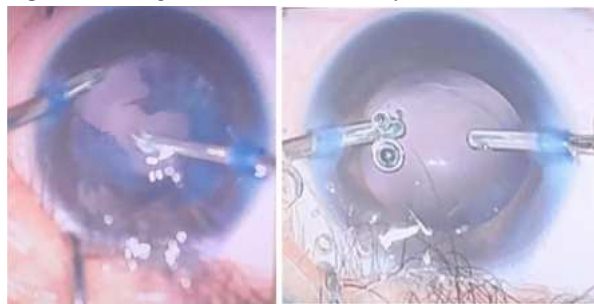


Figure 3: Intra operative images of Right eye capsulorhexis and anterior vitrectomy

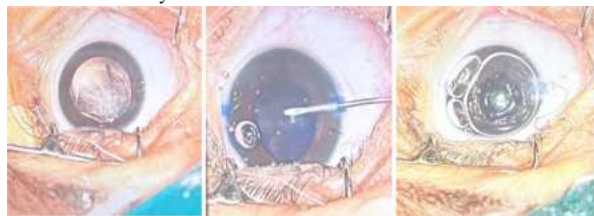


Figure 4: Intra operative images of left eye capsulorhexis, anterior vitrectomy and suturing of the entry ports.

Disclosure

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