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Ophthalmology

CLINICAL PROFILE OF PATIENTS OF OCULAR COLOBOMA PRESENTED TO THE TERTIARY HEALTH CARE CENTRE IN BUNDELKHAND REGION

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ABSTRACT **Purpose:** The aim of this study was to provide a retrospective analysis of the clinical profile of patients of OCULAR COLOBOMA in department of Ophthalmology at M.L.B. Medical College, Jhansi. **Materials And Methods:** Retrospective study of 25 patients with 32 eyes of Ocular Toxoplasmosis presented to us in the Department of Ophthalmology at M.L.B. Medical College, Jhansi. **Results** In this study the mean age of patients was 13 years with 15 male patients and rest 10 female. 18 patients had unilateral involvement and rest 07 had bilateral involvement. 34% had only anterior segment involved, while 39% had only posterior segment involvement. Rest 27% had both anterior and posterior segment involved. Visual acuity of patients primarily dependent on the location of the coloboma and presence of associated complications. **Conclusion** Coloboma is a rare congenital disorder, caused by defective closure of the embryonal fissure. Majority of patients were diagnosed in early age with maximum patients having posterior segment coloboma only. Retinal detachment and early presentation with cataract was seen.

KEYWORDS : Ocular, Coloboma, Congenital, Embryogenesis, Inferonasal

INTRODUCTION:

Coloboma is a Greek word that means mutilation [1], are caused by defects in embryogenesis. Coloboma are clefts caused by absent tissue in the inferonasal quadrant of the eye, but subtype, severity, and visual prognosis vary, depending on location and associated eye defects. The underlying aetiology of the phenotype is the failure of the ectodermal optic vesicle fissure to close.[2] This leads to coloboma affecting one or more areas of the eye including the cornea, iris, ciliary body, lens, retina, choroid, and optic nerve. Eyelid coloboma has also been described, but this is thought to arise from failure of the mesodermal folds to fuse at about 7–8 weeks of gestation. The typical, most frequently observed, ocular coloboma is seen in the inferonasal quadrant.[3] Coloboma in other quadrants are atypical and the embryologic basis for these is unclear. Ocular coloboma are frequently seen in association with other developmental defects. [4 Fundus coloboma poses threat to vision by way of the involvement of the macula and optic disc in the coloboma as well the increased risk of retinal detachment (RD) during the lifetime of the individual. The management of coloboma-related RDs has undergone significant changes with the advent of pars plana vitrectomy techniques and currently yields good reproducible results.

MATERIALS AND METHOD

This study was a retrospective observational study that involved 32 eyes of 25 patients of Ocular Coloboma complaining of chronic blurring of vision with anomalous looking of eye since birth. Patients were recruited from the OPD done at the Maharani Laxmi Bai Medical College, Department of Ophthalmology between May 2022 to May 2023. It was performed under the Helsinki Declaration of 1975, as revised in 2000. The necessary from the Ethical and Research Committee was obtained for the study.

Inclusion Criteria

All patients who presented to us with complaining of chronic blurring of vision with anomalous looking of eye since birth, which later examined using Fundoscopy and Optical Coherence Tomography.

Exclusion Criteria

- Patient who had any intraocular surgery.
- Patient who had any history of trauma.
- Patients with other retinal disorders.
- Patients with systemic illness.

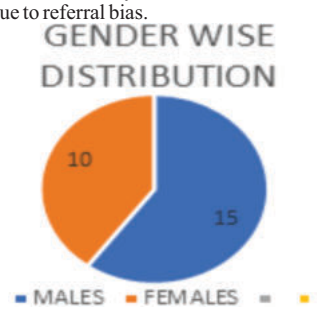
All patients were subjected to proper history taking, and examination which included Slit lamp examination for the diagnosis of ocular coloboma. Later Indirect ophthalmoscopy and Fundus picture was done to identify the location of coloboma and other associated complications such as Retinal Detachment which is commonly associated with coloboma. Later Optical Coherence Tomography was also done.

RESULTS

In this study the mean age of patients was 13 years with 15 male patients and rest 10 female. 18 patients had unilateral involvement and rest 07 had bilateral involvement. On fundus examination using indirect ophthalmoscope the location of coloboma was identified and showed that 34% had only anterior segment involved, while 39% had only posterior segment involvement. Rest 27% had both anterior and posterior segment involved. In this study it was found that patients of ocular coloboma had early presentation of cataract and increased chances of Retinal detachment. 15% patients of ocular coloboma presented to us had cataractous lens at the time of presentation. 3% patients of ocular coloboma who presented to us had Retinal detachment. Visual acuity of patients primarily dependent on the location of the coloboma and presence of associated complications.

DISCUSSION

Coloboma is a rare congenital disorder, caused by defective closure of the embryonal fissure. The occurrence of coloboma can be sporadic, hereditary (known or unknown gene defects) or associated with chromosomal abnormalities. Several eye field transcription factors such as PAX6, SIX3, LHX2, and RAX in different combinations are needed at each stage of development of the eye [5]. In this study we are reporting a higher prevalence of ocular coloboma in Bundelkhand region with 25 patients in 1 year duration. In this study 34% had anterior segment coloboma, 39% had posterior segment coloboma and rest had both anterior and posterior segment coloboma. Bermejo et al reported 55 cases of coloboma, of which 47% involved the iris, 40% were chorioretinal, and 13% were unspecified.[6] Retinal detachment was a rare complication of coloboma patients in this study, affecting only 3% of study patients. This is consistent with more recent reports,[7]and is less than early estimates of 20–40%[8,9] that were likely elevated due to referral bias.



PIE CHART: showing gender distribution

Table 1: showing age wise presentation of ocular coloboma.

AGE(years)	n(%)
10-20	19(58%)
20-30	09(29%)
30-40	03(10%)
40-50	01(3%)

Table 2: Distribution of patients according to symptoms

TYPES	n(%)
Anterior only(Iris and ciliary body)	10(34%)
Posterior only(chorioretinal and optic nerve)	13(39%)
Anterior + Posterior	09(27%)

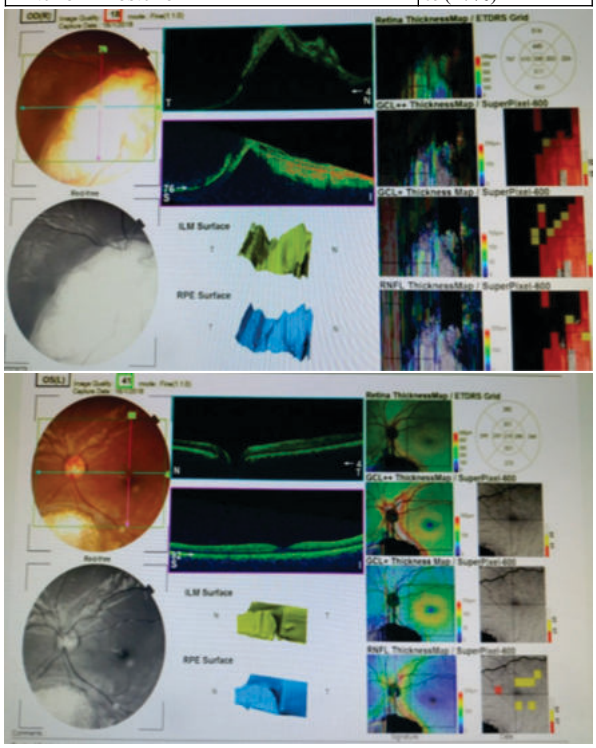


IMAGE 1,2: Showing OCT 3D WIDE. of a patient with bilateral coloboma.

REFERENCES

1. Duke-Elder S. Anomalous closure of embryonal cleft—typical colobomata. In: System of ophthalmology. St Louis: CV Mosby company; 1963. p. 456–88.
2. Mann I. Developmental abnormalities of the eye. Philadelphia: Lippincott, 1957:81–103.
3. Onwochei BC, Simon JW, Bateman JB, Couture KC, Mir E. Ocular coloboma. Surv Ophthalmol2000;45:175–94.
4. Gregory-Evans K. Developmental disorders of the globe. In: Moore A, Lightman S, eds. Fundamentals of clinical ophthalmology: paediatric ophthalmology. London: BMJ Books, 2000:53–61.
5. Zuber ME, Gestri G, Viczian AS, Barsacchi G, Harris WA. Specification of the vertebrate eye by a network of eye field transcription factors. Development. 2003;130:5155–67. doi: 10.1242/dev.00723.
6. Bermejo E, Martínez-Frías ML. Congenital eye malformations: clinical-epidemiological analysis of 1,124,654 consecutive births in Spain. Am J Med Genet. 1998 Feb 17;75(5):497–504.
7. Daufenbach DR, Ruttum MS, Pulido JS, Keech RV. Chorioretinal colobomas in a pediatric population. Ophthalmology. 1998 Aug;105(8):1455–1458.
8. Patnaik B, Kalsi R. Retinal detachment with coloboma of the choroid. Indian J Ophthalmol. 1981 Dec;29(4):345–349.
9. Gopal L, Badrinath SS, Kumar KS, et al. Optic disc in fundus coloboma. Ophthalmology. 1996 Dec;103(12):2120–2126.