Choroidal coloboma with internal limiting membrane folds: A rare association

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Key words: Choroid, coloboma, inter limiting membrane, retinal detachment

A 35-year-old male presented with the chief complaint of decreased vision in the right eye following trauma 2 months back. His best-corrected visual acuity was 20/20 partial in the affected eye. Fundoscopy revealed unilateral choroidal coloboma type 5 (Ida–Mann classification)[1] along with ILM folds that extended from coloboma toward the macula [Fig. 1a]. Fundus autofluorescence (FAF) revealed central hyperfluorescence and peripheral hypofluorescence [Fig. 1b]. Fundus fluorescein angiography (FFA) revealed the course of blood vessels passing through the middle of coloboma. Smaller blood vessels showed mild kinking [Fig. 1c]. Near-infrared reflectance imaging on spectral-domain optical coherence tomography (SD-OCT) revealed ILM folds [Fig. 1d]. The vitreoretinal interface showed ILM folds [Fig. 1e]. SD-OCT scan passing through coloboma demonstrated the abrupt transition of normal retina to colobomatous area [Fig. 1f]. Thorough examination revealed no associated break, dialysis, or retinal detachment. The patient is kept on regular follow-up.

Discussion

The incidence of congenital colobomata is 0.5–0.7/10,000 births. The severity of visual disability is highly variable depending on many factors, including size of coloboma, extent of macular or optic nerve involvement, and associated anomalies of the globe such as microphthalmos, microcornea, congenital cataract, and nystagmus.[1-3] Histologically, retinal pigment epithelium, choroid, and retina are poorly developed in the area of coloboma. The most accepted theory suggests differential globe layer deformation and increased internal limiting membrane stiffness as the causative mechanism in blunt trauma.[4] It is assumed that ILM folds appear after the trauma and extend from the colobomatous area up to the macula. Due to histological impaired differentiation and anatomic instability of the retina in the colobomatous area, the risk of rhegmatogenous retinal detachment (RRD) is also increased in such cases.[2,5] This coexistence of the ILM folds and choroidal coloboma is reported for the first time.

Clinical relevance

Any patient with choroidal coloboma must be warned about the risk of retinal detachment even with mild ocular trauma and counselled for annual fundus evaluation.

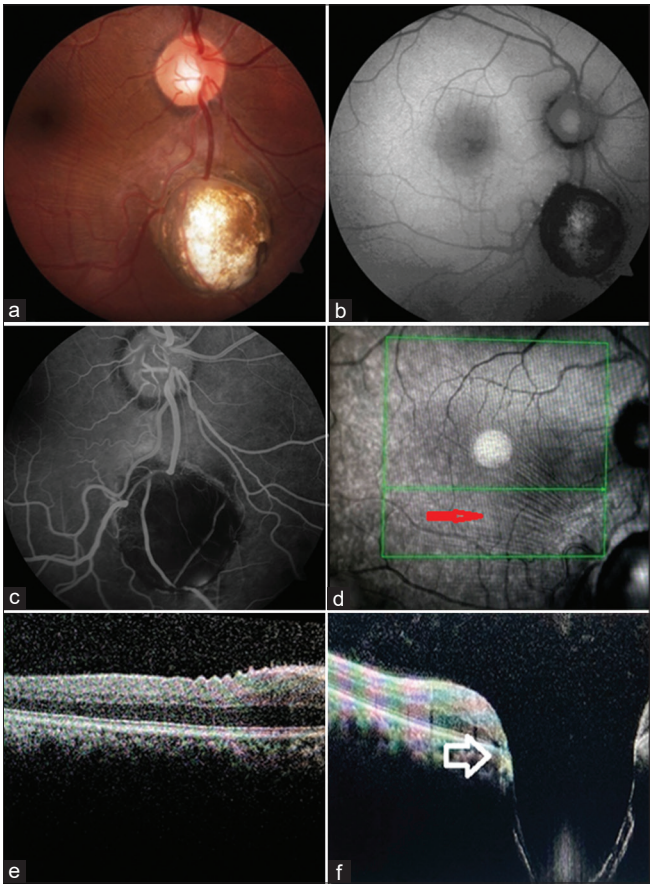

Figure 1: Fundus photograph of choroidal coloboma (a) Coloboma along ILM folds. (b) FAF showing central hyperfluorescence with a peripheral rim of hypofluorescence. (c) FFA showing the inferior retinal blood vessel traversing the middle of the coloboma and inferiorly dipped along the depth. (d) NIR showing ILM folds (red arrow) radiating from coloboma. (e) Vitreoretinal interface showed ILM folds (f) SD-OCT scan passing through coloboma demonstrating the abrupt transition of normal retina to coloboma area. The location of locus minoris resistantiae (white arrow) is also marked

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Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

References

1. Mann I. The Development of the Human Eye. 3rd ed. London: British Medical Association; 1964. p. 38.
2. Hornby SJ, Adolph S, Gilbert CE, Dandona L. Visual acuity in children with coloboma: Clinical features and a new phenotypic classification system. Ophthalmology 2000;107:511-20.
3. Kuhn F, Morris R, Mester V, Witherspoon CD. Internal limiting membrane removal for traumatic macular holes. Ophthalmic Surg Lasers 2001;32:308-15.
4. Jones Np, Tullo AB. Severe eye injuries in cricket. Br J Sports Med 1987;20:178-9.
5. Uhumwangho OM, Jalali S. Chorioretinal coloboma in a paediatric population. Eye 2014;28:728-33.