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Congenital Glaucoma Diagnosed in Late Childhood: A Case Report

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Background:

Primary congenital glaucoma (PCG) is the most common childhood glaucoma. It is caused by a defective development of the trabecular meshwork and the anterior chamber angle, which is believed to be inherited as an autosomal recessive disorder. The disease is characterised by high intraocular pressure (IOP), buphthalmos with corneal enlargement, and tears in Descemet's membrane. Although rare, it is a significant cause of blindness in children worldwide.

Case presentation:

A 12-year-old Romani girl came to the department of ophthalmology complaining of epiphora and right eye enlargement. In her medical history, recurrent eye redness, lacrimation, and photosensitivity were noted, with symptoms lasting 7-9 years, which had been treated as conjunctivitis. Upon examination, enlargement of the right eye (axial length 25.63 mm) and divergent strabismus could be seen. Visual acuity in the enlarged eye was reduced to hand movement and slit lamp showed corneal clouding and Haab's striae. Applanation tonometry measured IOP of 34 mmHg in the right eye. Fundus examination of the affected eye revealed a pale optic disc with a cup-to-disc ratio of 0.9 and visual field test showed residual temporal island of vision. The left eye had a complete normal finding. Based on clinical examination and imaging, PCG was diagnosed and trabeculectomy with mitomycin-C was performed on the right eye. Reassessment after four weeks showed a formed filtration bubble with IOP of 10 mmHg in the operated eye, but severe amblyopia persisted. After 12 months, visual acuity, IOP values, and visual field remained unchanged.

Conclusion:

Atrophy of the optic nerve caused by congenital glaucoma leads to a severe visual impairment in early years of life. This case illustrates the importance of early recognition and appropriate management of PCG to improve prognosis and to avoid irreversible damage to the visual function.

Keywords:

Haab's striae, intraocular pressure, optic nerve, primary congenital glaucoma