Bilateral Morning Glory Syndrome: a case report

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Introduction: The term Morning Glory Syndrome (MGS) was first described in 1970 by Peter Kindler and derived its name from its resemblance to a morning glory flower.[1] MGS is a rare congenital malformation of the optic nerve which is frequently associated with midline abnormalities of the brain and skull.[2] It is characterized by an enlarged, funnel-shaped excavation in the optic disc with peripapillary, chorio-retinal pigmentary changes, radial vessels and overlying central white glial tuft.[3,4] The prevalence of MGS has been reported to be 2.6 per 100,000 with rare bilateral cases.[5] It affects both sexes but females more commonly, and is rare in Africans.[6]

Aim: To report a rare case of bilateral Morning Glory Syndrome in a 6-year-old girl.

Case Report: A 6-year-old girl presented with poor distance vision and poor speech, observed one year before presentation. There was a positive history of use of herbal medications by the mother during pregnancy, on account of 9 years of infertility. Mother, who was 38 years old at the time of pregnancy, had a first-trimester febrile illness. The neonatal period was eventful with episodes of fever and jaundice. General examination showed a plump child, well-oriented, with left head tilt. Ocular examination showed visual acuity of 3/60 bilaterally, 30 degrees of alternating exotropia, and round pupils with pupillary reaction. Enlarged pale optic discs, predominantly radial vessels, and a surrounding hypopigmented cuff within an excavated area were seen on dilated fundoscopy. Visual acuity improved to 6/36 with -1.50 DS in both eyes after cycloplegic refraction. Oto-rhinolaryngology review showed pre-auricular sinus, bilateral impacted earwax, no septal deviation or cleft palate. Bilateral ear syringing and referral for speech therapy were done. Ultrasonography, Optical coherence tomography (OCT) and brain magnetic resonance imaging (MRI) were requested, but her father declined due to personal reasons.

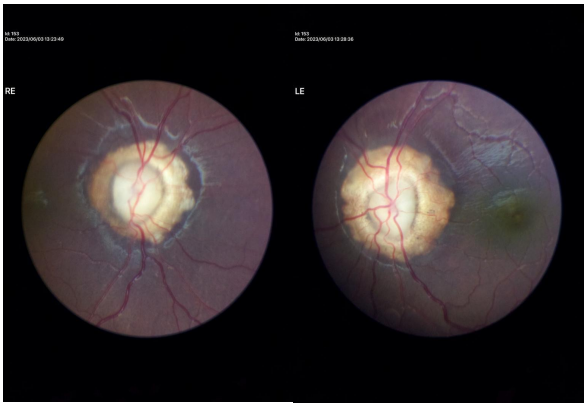

Figure 1: *Fundus photography showed pale discs with surrounding hypopigmented area in both eyes*

Consent for this report was obtained from her parents.

Discussion: MGS is a rare congenital optic disc anomaly associated with ocular and non-ocular abnormalities.[7] It presents in early childhood with decreased vision, strabismus, cleft lip/palate or basal encephalocele.[8] Visual acuity is usually poor. Occlusion therapy or refraction may help improve the vision of the affected eye(s).[9] Other ocular associations include: Nystagmus, Amblyopia, Retinal detachment, Persistent hyperplastic primary vitreous (PHPV), Congenital Cataract, microphthalmia, leucoma, optic nerve glioma, drusen, eyelid hemangioma.[10] Our patient presented with some of the ocular and non-ocular features of MGS, including speech defect, alternating exotropia, myopia and poor vision in both eyes. Fundus photography revealed fundoscopic features seen in MGS. Ultrasonography, OCT, Fundus fluorescein angiography (FFA), CT scan, and MRI are the investigative approaches for the diagnosis of MGS and detection of the associations.[10,11] Management requires an interdisciplinary

approach. Prevention of amblyopia, improvement of vision and management of other non-ocular disorders are the treatment goals. Counselling of parents is essential to help them understand the condition and prognosis. A close differential diagnosis for the index case is optic disc coloboma. Others include optic nerve pit, optic atrophy, optic nerve hypoplasia, and peripapillary staphyloma.[12]

Conflict of interest: The authors declare no conflict of interest

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