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Case Study

INTEGRATIVE AYURVEDIC APPROACH IN EARLY- ONSET HIGH MYOPIA WITH CONGENITAL NYSTAGMUS

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ABSTRACT

Paediatric high myopia is a significant cause of visual impairment and is often associated with prematurity, genetic factors, and secondary ocular conditions. A 2-month-old infant presented with poor eye contact and abnormal eye movements since birth. Ophthalmic evaluation revealed bilateral high myopia (−14.00 D), nystagmus, esotropia, and tessellated fundus. Based on ayurvedic correlation with *Vatika timira, Samanya timira chikitsa* was adopted as an adjunct to conventional management. The integrative treatment included spectacle correction, visual stimulation, ophthalmic follow-up, and Ayurvedic interventions comprising internal medications and *Panchakarma* procedures such as *Kashayadhara, Shiropichu, Abhyanga, Pizhichil, Matravasti*, and *Sashtika pinda sweda*. Serial assessments showed improvement in visual behaviour, progressing from light perception to fixation and object tracking. Retinoscopy demonstrated reduction in refractive error from −14.00 D to −9.00 D after five treatment courses. Although high myopia, nystagmus, and esotropia persisted, functional visual responses improved. This case suggests the potential supportive role of integrative Ayurvedic management in paediatric visual rehabilitation; however, further systematic studies are required to establish efficacy and safety.

INTRODUCTION

High myopia is a significant cause of visual impairment worldwide and is generally defined as a refractive error of −6.00 diopters or greater, or an axial length exceeding 26mm.[1] The global prevalence of high myopia has increased substantially over recent decades and is projected to continue rising, making it an important public health concern.[2] In addition to reduced visual acuity, high myopia is associated with a range of sight-threatening complications, including retinal degeneration, retinal detachment, myopic maculopathy, glaucoma, and choroidal neovascularization. The risk of these complications is particularly high in individuals with early-onset or pathological myopia.

In children, uncorrected high myopia can have substantial developmental consequences.

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Reduced visual ability may impair social interactions, as difficulties in recognizing facial expressions and interpreting emotions can lead to social withdrawal and isolation. This profound visual deprivation has been described as "visual autism" reflecting the developmental and behavioural effects that may result from inadequate visual stimulation during early childhood.[3] Early diagnosis and timely intervention are therefore essential to optimize visual outcomes and minimize long-term disability. Conventional management primarily focuses on refractive correction, visual rehabilitation, and monitoring for progressive ocular complications.

From an Ayurvedic perspective, the clinical manifestations of high myopia can be correlated with the features of *Vatika timira*[4], a condition characterized by progressive diminution of vision due to vitiation of *Vata dosha* affecting the visual apparatus. Classical descriptions of *Timira* include symptoms resembling blurred vision (*Avila darshana*)[5], progressive visual impairment, tessellated fundus (*Shosha*)[6], and structural alterations attributable to aggravated *Vata*.

Therapeutic principles aimed at pacifying *Vata*, nourishing ocular tissues, and preserving visual function are described in the management of *Timira* and related ocular disorders[7].

Although the role of Ayurveda in refractive errors remains an area requiring further scientific exploration, integrative approaches combining conventional ophthalmic care with Ayurvedic interventions may offer supportive benefits in visual development and functional outcomes. The present case report describes the clinical course and integrative management of a child with early-onset high myopia associated with congenital nystagmus and esotropia, who underwent Ayurvedic treatment alongside standard ophthalmological care, with periodic follow-up assessments of visual and refractive outcomes.

Case Report

A 2-month-old male infant, one of twins born to consanguineous parents, presented to the Shalakyatantra Outpatient Department (OPD) with complaints of poor eye contact, inability to focus on faces, and abnormal involuntary eye movements since birth. The child was born at 37 weeks of gestation by normal vaginal delivery with a birth weight of 1900 g. Prior to presentation at our institute, he had been evaluated at Aravind Eye Hospital, Coimbatore, where ophthalmological examination revealed bilateral high myopia (−14.00 D in both eyes) with nystagmus and tessellated myopic retinal changes. Spectacle correction and visual stimulation therapy were advised. Following the diagnosis, the patient was brought to our institute for further management and visual rehabilitation. On examination, the child demonstrated poor visual fixation and limited visual responsiveness. Considering the visual developmental concerns, the patient was admitted for treatment. Following the first admission, improvement was observed in visual responsiveness and fixation to light stimuli. The patient was subsequently followed regularly in the Shalakyatantra OPD and underwent four additional admissions for planned treatment. During each visit, clinical assessment and ophthalmological records were reviewed, and treatment was continued accordingly. Progressive improvement was observed over the follow-up period. At approximately one year of age, the child was able to fix and follow objects more consistently. Pendular nystagmus and esotropia persisted, and refractive assessment showed high myopia, for which spectacle correction (−11.00 D) was advised for constant wear. At the latest follow-up examination conducted in January 2026, at the age of 2 years and 1 month, the refractive error was −8.50 D in the right eye and −9.00 D in the left eye. Nystagmus persisted; however, visual responsiveness, fixation behaviour, and object tracking had improved compared with the initial presentation. The child demonstrated better functional visual performance and was able to fix and follow visual targets more effectively than at the time of first presentation.

Table 1: Timeline of Ophthalmological Assessments and Clinical Outcomes

Time point	Age	Clinical Presentation	Ophthalmic findings	Intervention
Baseline (May–Jun 2024)	3 and half months	Poor eye contact, responds to light	High myopia (−14 D), tessellated fundus	Spectacles + vision stimulation
Sep–Oct 2024	8 months	Persistent poor fixation	High myopia, nystagmus	Continued follow-up
Dec 2024	11 months	Defective vision	RE −11 D, LE −11 D, esotropia	Continued therapy
Mar–Apr 2025	1 year	Improved responsiveness	Persistent high myopia	Integrative management
Jan 2026	1 year 10 months	Better fixation	RE −8.5 D, LE −9 D	Follow-up

Table 2: Integrative Treatment Protocol

Treatment Category	Intervention
Internal medicines	*Kombanchadi gulika* ½ tab twice daily with honey *Gopichandanadi gulika* ½ tab twice daily with honey *Rajanyadi choornam* ¼ tsp with honey and ghee *Uramarunnu* with breast milk, *Prakarayogam* (age specific)
External therapy	*Sekam* with *Yashti kashayam, Netrapichu* with *Durvaghritam, Shiropichu* with *Lakshadi tailam* and *Dhanwantharam tailam*
Panchakarma	*Kashayadhara* with *Nalpamaradi kashayam* (7 days), *Vicharana snehapana* with *Ashtanga ghrita* (3 days), *Abhyanga, Ushma sweda lakshadi* (2 days), *Virechana* with *Saptala siddha ghritam* 1 day, *Pizhichil* (7days) with *Lakshadi tailam* and *Dhanwantaram tailam, Matravasthi* (21days) *Dhanwantaram* and *Ashtang Ghritam, Sashtika pinda sweda* (5 days)

The same treatment protocol was repeated across five admissions with modification according to clinical response

Table 3: Changes in Clinical Parameters from Baseline to Latest Follow-up

Parameter	Baseline	Final Follow-up	Change
Eye contact	Poor	Improved	Improved
Fixation	Light only	Fix and follow	Improved
Visual response	Light perception	Functional response	Improved
Nystagmus	present	Present	No change
Esotropia	Absent/not documented	Present	Developed
RE	−14.00 D	−8.50 D	+5.50 D
LE	−14.00 D	−9.00 D	+5.00 D

DISCUSSION

The present case involved an infant with low birth weight presenting with high myopia and congenital nystagmus. As fundus examination showed no retinal findings suggestive of retinopathy of prematurity, the refractive error was considered to be associated with abnormal ocular growth and axial elongation. From an Ayurvedic perspective, the clinical features were correlated with *Vātaja timira* involving the *Prathama* and *Dvitīya patalas*, characterized by diminished vision, poor fixation, and ocular instability. Low birth weight may additionally be interpreted as contributing to impaired *Dhātu poṣaṇa* and altered visual development.

Considering *Vata* predominance along with age-related kapha dominance (*Bālyāvasthā*), treatment was planned with the objectives of *Deepana–pācana, Vāta śamana, Brimhaṇa*, and *Rasāyana*. Internal medications and formulations described in *Arogyarakshakalpadruma* were administered to support digestion, nourishment, and growth. *Panchakarma* procedures, including *Kashaya dhara, Vicharana snehapana, Abhyanga, Sweda, Virechana, Pizhichil, Matra vasti,* and *Shashtika pinda sweda*, were incorporated to promote *Dosha* balance and tissue nourishment. Local therapies such as *Netra pichu* and *Shiropichu* were used as supportive measures for ocular stabilization.

During follow-up, improvement was observed in visual behavior, fixation, and refractive status, with refractive error reducing from −14.00 D at baseline to −9.00 D at final follow-up. However, refractive changes during infancy may also reflect the physiological process of emmetropization. Therefore, the observed outcomes may represent a combined effect of natural ocular development and therapeutic interventions.

This case suggests that an integrative approach combining conventional ophthalmic care with Ayurvedic management may support visual development in infants with early-onset high myopia. However, conclusions regarding efficacy cannot be drawn from a single case report. Further prospective studies with objective biometric assessment and long-term follow-up are required.

REFERENCES

1. Flitcroft I, Ainsworth J, Chia A, Cotter S, Harb E, Jin ZB, et al. IMI-Management and Investigation of High Myopia in Infants and Young Children. Invest Ophthalmol Vis Sci. 2023 May 1; 64(6): 3. doi:10.1167/iovs.64.6.3 PubMed PMID: 37126360; PubMed Central PMCID: PMC10153576.
2. Shah R, Vlasak N, Evans BJW. High myopia: Reviews of myopia control strategies and myopia complications. Ophthalmic Physiol Opt. 2024 Sep 1; 44(6): 1248–60. doi:10.1111/opo.13366
3. Du Y, Meng J, He W, Qi J, Lu Y, Zhu X. Complications of high myopia: An update from clinical manifestations to underlying mechanisms. Adv Ophthalmol Pract Res. 2024; 4(3): 156–63. doi:10.1016/j.aopr.2024.06.003 PubMed PMID: 39036706; PubMed Central PMCID: PMC11260019.
4. Chandel S, Daya Shankar Singh, Arun Kumar Pandey. Myopia and Prathama Patalagata Timira: An Integrative Review from Ophthalmology and Ayurveda. J Ayurveda Integr Med Sci. 2026 Jan 16; 10(12): 186–91. doi:10.21760/jaims.10.12.28
5. Murthy KRS, translator. Vagbhata's Astanga Hridayam. Vol. 3. Uttara Sthana. 9th ed. Varanasi: Chowkhamba Krishnadas Academy; 2017. Ch. 12, Drishtiroga Vijnaneeyam. p. 107
6. Vāgbhaṭa. Aṣṭāṅga Hṛdaya. Sūtrasthāna, Doṣabhedīya Adhyāya, verses 49–50. In: Sreekumar T, translator and commentator. Principles of Ayurveda Explained in Dexterous Verse. Sūtrasthāna-I. Mannuthy (Kerala): Publication Department, Harisree Hospital; 2013. p. 290–291.
7. Murthy KRS, translator. Vagbhata's Astanga Hridayam. Vol. 3, Uttara Sthana. 9th ed. Varanasi: Chowkhamba Krishnadas Academy; 2017. Chapter 13, Timira Pratishedham; p. 121.

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