

Assessment of Acceptance of Ayurveda Visual Science Medications: Revealing Unmet Needs

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Abstract

Sustainable development is a global phenomenon and environmental degradation is a Ayurvedic Visual Science (AVS) has served the nation since Rajrishi Nimi, the King of Videha, well documented in Susruta Samhita in 800-600BC. Vision is the most essential sensory function of humans. Loss of vision is considered the highest disability in the general population. The unmet needs in ophthalmic research include glaucoma, retinal dystrophies, Diabetic Retinopathy (DR), Retinitis Pigmentation (RP), dry eye, progressive myopia, macular degeneration, and corneal diseases. AVS has progressed tremendously in treating diabetic retinopathy, macular degeneration, and retinitis pigmentosa. The Ayurvedic ocular medication comprises oral medication, Panchakarma and Kriya kalpa (Ocular procedures) to treat eye diseases holistically after factoring in the entire health profile of patients.

A small cross-sectional study was conducted at Sri Sri Ayurveda Medical College, Bangalore, and 885 patients were included, nearly 2% of total OPD strength in Shalya and Shalakya OPD. Maximum patients are males between the ages of 51-60 years. The most accepted group for Ayurveda ocular treatment suffered from progressive myopia (26%), followed by 24% of patients with diabetic retinopathy and 13% with chronic conjunctivitis and Age-related macular degeneration. A consensus roadmap from AYUSH should address the unmet need through Ayurveda visual science supported by tangible clinical outcomes.

Keywords: Ayurvedic Visual Science (AVS); Diabetic Retinopathy (DR); Retinitis Pigmentation (RP) dry eye; Progressive myopia; Macular degeneration; Unmet need; Netra kriya kalpa

Introduction

World Health Organization (WHO) released a world report on vision, which stated that over 2.2 billion people with vision impairment or blindness worldwide and over 1 billion have conditions that could be treated or prevented. In India, recent estimates state that the prevalence of blindness (presenting vision, 6/60 in the better eye) was 8.5%. The prevalence varied from 4.2% to 13.7% across the different districts of India. Indian prevalence of low vision (presenting vision, 6/18-6/60 in better eye) was 23.85%. Retinopathy, cataract, age-related macular degeneration, and glaucoma are coming up as leading causes of blindness. Ayurvedic Visual Science (AVS) has served the nation since Rajrishi Nimi, the King of Videha, well documented in Susruta Samhita in 800-600BC [1]. Ayurveda treatment modalities can be implemented to tackle visual impairment of lifestyle-related blindness and degenerative eye diseases where surgical intervention has the least role. Despite of well-established Ayurveda ophthalmic centers have been coming up in Kerala backed by the classical literature and formulations, which are proven as effective and low-cost interventions but poor data to aid in planning and lack of integration of Ayurveda eye care into the overall healthcare of our country are big challenges meeting the anticipatory demand of Ayurveda visual science. Ayurveda visual centers should establish in every state to recognize eye conditions and identify the patient that needs Ayurveda treatment for sight-saving, create more data, provide training to undergraduate and postgraduate Ayurveda students, paramedics and award certificates for practicing Ayurveda visual science and improve community involvement [2].

Materials and Methods

The national programme for control of blindness was launched in the year 1976 with the goal of reducing the prevalence of blindness from 1.4% to 0.3%.

Target for the 10th Plan was to reduce the prevalence of blindness to 0.8% by 2007. Prevalence of Blindness is 1% [3]. During the 11th plan, the scheme is to consolidate gains in controlling cataract blindness and also initiate activities to prevent and control blindness due to other causes. Despite national programs in India, other causes of blindness are increasing, and people are seeking Ayurveda treatment, but no consolidated data. Therefore, a cross-sectional study was conducted at an Ayurveda medical college to know the people's acceptance of Ayurveda visual science to develop future strategies [4].

Ayurveda visual science and its prospect

It is a fact that Ayurveda Visual Science (AVS), otherwise known as Netra Chikitsa, is part of Salakya Tantra. The most proficient and prominent ophthalmic surgeon Nimi worked on many treatises, all exclusively and exhaustively dealing with the surgery

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and treatment of the eye and its diseases. Mostly the classification of diseases in Ayurveda are symptom based, but the anatomical classification found in ocular diseases shows its specificity in current days [5]. Seventy-six eye diseases are described in Salakya Tantra, but no specialty or exclusive eye clinics in leading government Ayurveda hospitals. No post-graduation training exclusive on Netra roga and Ayurveda doctors is not trained with modern eye investigative tools. Sreedhareeyam eye hospital, Kelara, is Ayurveda's only super specialty eye hospital. More than 52,000 Out-patients and around 5000 In-patients undergo treatment for all the 72 eye diseases mentioned in Ayurveda, including the diseases that affect the Cornea, Eyelids, Optic nerves, and Retina [6].

Central Council for Research in Ayurveda Sciences (CCRAS) an autonomous organization under the Ministry of AYUSH, Government of India has contributed a lot to bringing Ayurveda visual science to the limelight, conducted many workshops and seminars, prepared IEC materials, and nominated regional Ayurvedic institute, Lucknow, as the CCRAS Centre for eye diseases. Sreedharyam eye hospital has significantly contributed to Ayurveda visual science through its exclusive hospital in Kerala and branches in major cities of India in the last two decades [7].

AVS has progressed tremendously in treating diabetic retinopathy, macular degeneration, and retinitis pigmentosa. Ayurvedic remedies and procedures treat eye diseases holistically, factoring in the entire health profile of patients. Oral medication for general health and ophthalmic conditions, Sodhana therapy (purificatory therapy), leech therapy, and Kriya kalpa (ocular procedures) are the main modalities of treatment revealed in the case reports/case series of Sreedhareeyam eye hospitals [8].

The research perspective of Ayurveda visual science is limited. There is a wide gap in the adoption of scientific technologies for diagnosis and assessment in the visual science of Ayurveda. Ayurveda is experiencing a severe deficiency in capacity building, human resource development, and education in Visual science. Epidemiological research and randomized clinical trials in AVS are not yet found in modern literature. The research outlines that AVS is limited to case series and clinical success case reports [9].

Acceptance of Ayurveda visual science (Netra Chikitsa)

Basic healthcare services have been considered human rights. The World Health Organization (WHO) has supported the concept of Universal Health Coverage (UHC) across the globe. Treatment failure in ophthalmic surgery and no curative management in age-related macular degeneration, retinitis pigmentosa, diabetic retinopathy, and glaucoma are reasons for the creation of unmet needs in Ayurveda visual science. Unmet need in visual science is a rights-based measure that helps determine the visual impairment to improve the visuality [10]. The public acceptance of Ayurveda visual science is not limited to Sreedhareeyam eye hospitals now but to all Ayurveda colleges and research centers. Our popular prime minister highlights the visual

science of Ayurveda by stating the regain of eyesight of Rosemary Odinga of Kenya through Ayurveda in the foundation stone ceremony of the WHO global center for traditional medicine, Jamnagar, India. The national and global expectations of AVS is increased many folds. It starts from the progressive myopia of children to the optic neuritis of old. If AVS is developed, India will be added a spot for medical tourism in AVS [11].

The negative effect of vision loss on quality of life has been demonstrated in association with cataracts, diabetic eye disease, and age-related macular degeneration. Consistently, a year of life with severe vision loss has been valued at a 50% to 70% decrement compared with a year of life in perfect health [12]. A small cross-sectional study was conducted at Sri Sri Ayurveda medical college, Mysore and 885 patients were included, nearly 2% of the total OPD strength of Shalya and Shalakya. Maximum patients are males between the ages of 51-60 years. The most accepted group for Ayurveda ocular treatment suffered from progressive myopia (26%), followed by 24% of patients with diabetic retinopathy and 13% with chronic conjunctivitis and age-related macular degeneration. Most patients are pre-diagnosed [13].

Ayurvedic ocular medications comprise oral medication, Panchakarma procedures, and Kriya kalpa (Ocular procedures) to treat eye diseases holistically after factoring in the entire health profile of patients [14]. Kriya kalpa (Tropical therapy of the eye) is specially designed in Ayurveda to achieve satisfactory drug concentration in ocular tissues because oral medications seldom cross the blood-aqueous and blood-retinal barriers. The two functional barriers restrict the movement of blood elements to the intraocular chambers and explain why drugs administered orally or intravenously can hardly reach therapeutic levels in intraocular tissues. Various Kriya kalpa in clinical practice are illustrated. The Grita, Kwatha, Rasa rasayana easily cross the blood-aqueous barrier due to the lipophilic, hydrophilic and nano action of bio-active molecules in the sclera.

Innovative drug delivery techniques are explored to overcome the limitations of systemic treatment of ophthalmic disorders. Panchakarma and nanomedicine of Ayurveda bhasma (Nano particles) can overcome the difficulties in drug concentration in ocular tissues as physiological barrier. The oral medication in ophthalmic practice is illustrated.

Results

Chronic conjunctivitis is well managed by systemic therapy and eye drops. It was observed that successful treatment of primary and recurrent Pterygium was possible in Ayurveda. The emergence of newer cancers and their metastatic lesions bought eye bulge cases to Ayurveda. Clinical success in eye bulges is achieved after the regression of brain tumors through Ayurveda and ocular procedures. Patients of diabetic retinopathy have excellent results with Ayurvedic oral medicines, external treatments, and dietary and lifestyle restrictions (Tables 1-3).

Ocular morbidities	No of cases (N=885)
Progressive myopia	232 (26.21%)
Cataract	29 (3%)
Diabetic retinopathy	211 (24%)

Age-related macular degeneration	112 (13%)
Glaucoma	25 (2.82%)
Retinitis pigmentosa	54 (6%)
Optic neuritis	11
Central serous retinopathy	22 (2.5%)
Pterygium	15
Chronic conjunctivitis	114 (13%)
Rheumatic scleritis	17
Bulging of eyeball other than hyperthyroidism	13
Dry eye	30 (3.3%)
Total	885

Table 1: The magnitude of ocular diseases in ayurveda hospitals.

S. No	Name of the Kriya kalpa	English translation
1	Netra Seka	medicated liquids are poured on the closed eyes
2	Ashchyotana	Dropping of a decoction over the conjunctiva
3	Anjana	Application of collyrium
4	Tarpana	Eye nourishment by ghee
5	Putapaka	Retention of medicated prepared I n puta paka
6	Pariseka	Closed eye irrigation
7	Pindi	Poultice application in eye
8	Vidalaka	Medicated herbal paste applied over the eyelids
9	Netradhara	Continuous dropping medicated oil/decoction over the eye
9	Shira vestonam	Bandage over eye and head
10	Sira lepam	Paste over fore head
11	Drustiprasad abhyanga	Eye massage

Table 2: Netra Kriya kalpa (Ocular procedures) in practice.

S. No	Name of oral medications	Indications
1	Saptamruta Lauha	Tridosha hara, conjunctivitis
2	Bilvadi Gulika	Anti toxin, detox, all eye problem
3	Sudarsana ghan Vati	Kaphaja netra roga
4	Chandraprava Vati	Strength to eye muscles, diabetic
5	Saptamruta Kwatha	Inflammatory eye conditions
6	Punnavadi Kwatha	Glaucoma
7	Cirabilvadi Kwatha	Pacify vata in general

8	Jeevantyadi Taila	Vatic condition of the eye
9	Ananta Grita	All eye disorders
10	Triphala Grita	Tarpana, detox
11	Vidaradi Grita	Inflammatory eye conditions
12	Jeevantyadi Grita	Pitta and Vata conditions
13	Agasthi Haritaki	Kapha-Vata conditions
14	Dasamula Haritaki	Vata and Pitta conditions
15	Yogendra Rasa	Vascular disorder of eyes
16	Siddha Makardvaja	Kapha conditions, allergic
17	Br Vata Chintamani	Diplopia, pain conditions

Table 3: Common ayurveda oral medications in our ocular practice.

Discussion

Vision is humans’ most important sensory function, with more than 30% of the brain involved in processing visual information. Consequently, loss of vision is considered the highest disability in the general population. The unmet needs in ophthalmic research include glaucoma, retinal dystrophies, Diabetic Retinopathy (DR), Retinitis Pigmentation (RP) dry eye syndrome, progressive myopia, Macular degeneration, and corneal diseases. The unmet needs should guide policymakers, the Ayurveda industry, and academia in their Ayurvedic endeavours to minimize preventable blindness like contemporary ophthalmology.

Conclusion

This small cross-sectional study increasingly reveals the acceptance of Ayurveda Visual Science (AVS) medications. More investments are needed in infrastructure, capacity building, skill development, and creating awareness to reveal the unmet need in ophthalmology. Undoubtedly, Ayurveda visual science medications got a place in Ayurveda health care. A consensus roadmap from AYUSH should address the unmet need through Ayurveda visual science supported by tangible clinical outcomes.

References

1. Balakrishnan P, Ajayan S, Mukkudakkattu S, Nechiyil K, Nambi N (2022) Review of unique ophthalmic formulations in vaidya manorama: A traditional kerala ayurveda literature. J Ayurveda Integr Med 13: 100576.

2. Pisudde PM, Taywade ML, Sushma K, Mehendale AM, Shukla AK (2015) An epidemiological study of common ocular morbidities among

elderly population in the Wardha, district, Maharashtra, India. Epidemiology: Open Access 5.

3. Agrawal S, Rajagopala M (2017) Clinical study on primary open-angle glaucoma with ashchyotana, tarpana and oral medication. Ayu 38: 33-38.

4. Wong KH, Nam HY, Lew S (2022) Discovering the potential of natural antioxidants in age-related macular degeneration: A review. Pharmaceuticals 15: 101.

5. Salunke AS, Kolape HR, Lahankar M, Lone SM (2014) A Clinical case study of ‘Vayasthapan gana’ in tritiya chaturtha patalgat doshdushti With Special Reference (WSR) to dry ARMD (Age Related Macular Degeneration). Int J Ayurved Med 5: 139-142.

6. Anju D, Pushpa RP, Ajoy V, Ashwini MJ (2017) Ayurvedic management of retinitis pigmentosa (Doshandha)-A case study. J Ayurved Integrat Med Sci 2: 183-187.

7. Verma R, Khanna P, Prinja S, Rajput M, Arora V (2011) The national programme for control of blindness in India. Australas Med J 4: 1-3.

8. Ramachandran CK, Nimi T (1984) Ophthalmology of ancient India. Anc Sci Life 3: 183-7.

9. Nafees S, Akhtar J, Kaur J. Indian traditional medicinal plants in ophthalmic diseases. Avicenna J Phytomed 12: 566-575.

10. Scott AW, Bressler NM, Folkes S, Wittenborn JS, Jorkasky J. Public attitudes about eye and vision health. JAMA Ophthalmol 34: 1111-1118.

11. Narayanan NN, Aravind K, Krishnendu S (2020) An ayurvedic protocol to manage rhegmatogenous retinal detachment and the resultant macular hole-A case report. Int J Curr Res Rev 12: 10-16.

12. Occhiutto ML, Freitas FR, Maranhao RC, Costa VP (2012) Breakdown of the blood-ocular barrier as a strategy for the systemic use of nano-systems. Pharmaceutics 14: 252-275.

13. Narayanan NN, Aravind K, Krishnendu S (2020) Management of proliferative diabetic retinopathy and its associated conditions using ayurvedic therapies: A case series. Int J Curr Res Rev 12: 10-22.

14. Copado IA, Baxter SL (2023) Unmet needs in vision care among vulnerable patients. JAMA Ophthalmol 13.