

Ayurvedic Insights into Keratoconus: A Clinical Success Story

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ABSTRACT

Keratoconus is a progressive corneal disorder characterized by thinning of the central cornea, leading to a conical shape and refractive errors. In Ayurveda, this condition can be correlated with *Prathama Patalagata Vataja Timira*, which manifests with symptoms like *Vyaviddha Darshana* and *Avyakta Darshana*. This paper presents a case of a 30-year-old male who visited the OPD with complaints of blurred vision for distant objects for the past 2 years. Clinical examination and investigations confirmed a diagnosis of keratoconus. The patient was treated with an Ayurvedic approach, including *Sadhyo Virechana* with Trivrut Lehya, *Nasya* with *Anutaila*, *Seka* with *Triphala Kashaya*, and *Tarpana* using *Jeevantyadi Ghrita* and *Patoladi Ghrita*. Additionally, *Putapaka* and *Pindi* with *Guduchi* and *Kumari Kalka*, along with *Matra Basti* using 50ml *Triphala Ghrita*, were administered. Following the treatment, a significant improvement in vision was observed. This case highlights the potential of Ayurvedic interventions in managing keratoconus and improving visual function.

Keywords: Keratoconus, Prathama patalagata timira, Krishnamandala

INTRODUCTION

Keratoconus is the most common ectatic corneal disorder. It is non-inflammatory, usually bilateral but may be asymmetric, ectatic corneal disorder associated with corneal thinning and steepening, where in the area of maximum thinning coincides with the apex of the cone. The location of maximum steepening usually lies inferior to the center of the cornea¹. The induced myopia and irregular astigmatism due to changes in corneal contour is the cause for decrease in visual acuity in these patient². The prevalence of the keratoconus varies from 54.5 to 230 per 100000 population. Keratoconus is usually idiopathic in nature.³

In Ayurveda, the cornea can be correlated with Krishnamandala. According to Acharya Sushruta, Krishnamandala originates from the Vayu Mahabhuta⁴. When Vayu gets vitiated during Garbhavastha due to Dauhrida Vamana, it can lead to Vikrutakshi⁵, which can be understood in terms of corneal disorders. Keratoconus can be correlated with Prathama Patalagata Vataja Timira, as most of its symptoms such as Vyaviddha Darshana and Avila Darshana closely resembles.

MATERIALS AND METHODS

Chief complaints -Blurriness of vision for distant objects since 2 years

Associated complaints -Occasional Eye burning sensation since 2 years

History of present illness

A 30-year-old male was apparently healthy 2 years ago. He then started noticing blurring of vision and had difficulty seeing distant objects. It was associated with occasional burning sensation in both eyes. For this, he visited a nearby ophthalmologist, where he was diagnosed as a case of keratoconus. He was advised to use spectacles and lubricating eye drops (Aquim T eye drops). However, as the patient was not willing to use spectacles, he visited our hospital for further management.

Past medical history – Nothing significant

Family history- Nothing significant

Personal history

Ahara -Mixed food, laghu ahara, viruddha ahara

Vihara-exposure to screen

Nidra – 7-8 hr

Anhyas -nil

Anyas – nil

Ashtasthana Pareeksha

Nadi- 74bpm

Mala – 1 time/ day

Mutra – 3-4 times/ day

Jivha – Alipta

Drik-Vaikruta

Shabda- Prakruta

Sparsha- Prakruta

Akruti- Madhyama

Sthanika pareeksha

Cornea		Right eye	Left eye
	Transparency	Transparent	Transparent
	Vascularization	Absent	Absent
	Sensation	Normal	Normal
Anterior chamber	Depth	Deep	Deep
Signs	Munsons sign	Present	Absent
Slit lamp examination	Vogts striae	Absent	Absent
Ophthalmoscope examination	Oil drop sign	Present	Absent

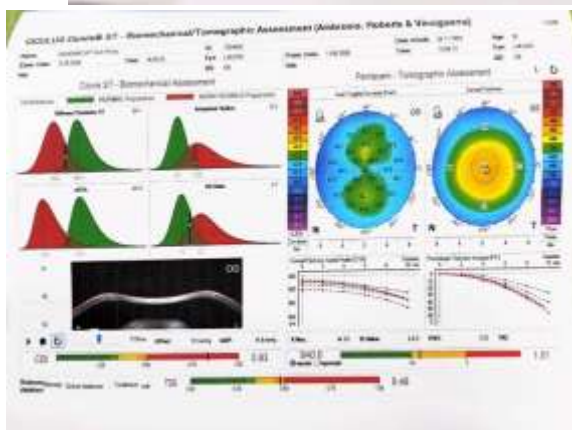
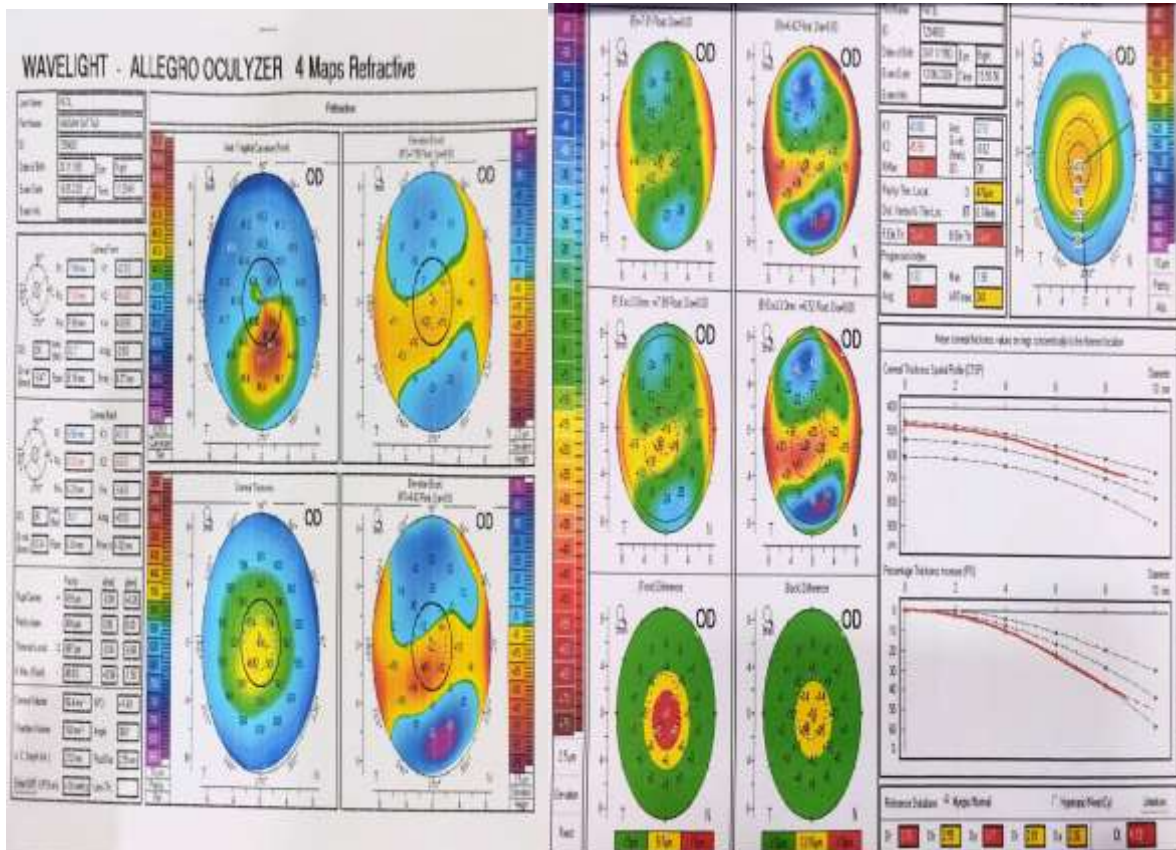
Visual acuity

	Right	Left eye	Both eye
Distant vision	6/24P	6/9	6/9
Pin hole	6/9	6/9	
Distant vision with specs	6/6	6/6	6/6

Near vision without spect	N6	N6	N6
Near vision with spect	N6	N6	N6

Investigation

Topography of Right eye



Interpretation –

K1: 43.0 D

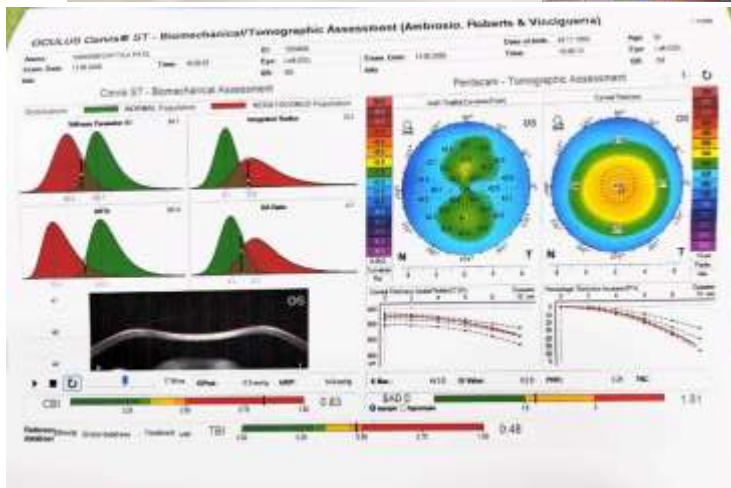
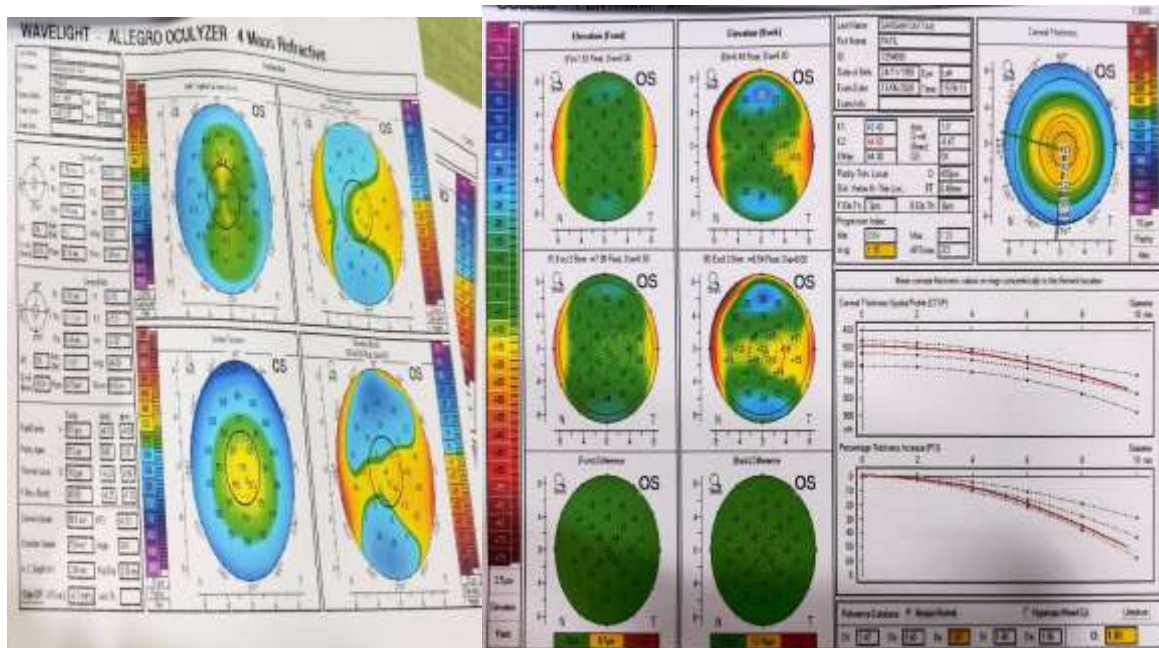
K2: 46.1 D

Kmax: 50.2 D

Thinnest pachymetry: 483 μ m

Keratoconus eye

Topography of Left eye



K1: 42.3 D

K2: 43.7 D

Kmax: 44.3 D

Thinnest pachymetry: 512 µm

Normal eye

Roga pareeksha

Needana – lagu ahara , adhyashana, viruddha ahara , Sukshma nirikshana

Samprapti

Nidana sevana

Rasadhatu kshaya, Stanikakapha dosha dushti

Kapha dosha kshaya and vata vrudhhi

Dushita vata leads to Krishna mandala vaigunya and pittadushti

Thinning of cone (loosing of collagen fibers)

Vyaviddha darshana , Avyakta darshana

Pratamapatalagata vataja timira

Chikitsa given

1. Sadhyo virechana with 40gms trivrutta lehya
2. Nasya with Anutaila 8 drops to each nostril
3. Seka with triphala Kashaya

4. Tarpana with Jeevantiyadi ghrita + patoladi ghrita
 5. Pindi with guduchi+kumarii kalka
 6. Putapaka last 3days
 7. Eye exercise
 8. Matra basti with triphala ghrita 50ml For 7 days
- This treatment was – 2 sitting

Shamanoushadhi

1. Punarnavadi kashaya 15ml tid BF
2. Netra raksha Kashaya 15ml tid BF
3. Chadraprabha vati 1-1-1 AF
4. Gokshuradi Guggulu 1-1-1 AF
5. Sukumara rasa 1-0-1 AF

RESULT

	Right	Left eye	Both eye
Distant vision	6/12	6/6	6/6
Pin hole	6/9	6/6	
Distant vision with spectacles	6/6	6/6	6/6
Near vision without spectacles	N6	N6	N6
Near vision with spectacles	N6	N6	N6

Discussion

Acharya Sushruta states that the *Krishna Mandala* (cornea) originates from the *Vayu Mahabhoota*, and its proper functioning is regulated by *Vata Dosha*. When *Vata* becomes imbalanced, it disturbs the normal activity of the *Krishna Mandala*, resulting in various corneal disorders (*Krishna Mandalagata Rogas*). The clinical features of keratoconus closely resemble those of *Vataja Timira*, where patients commonly report symptoms such as distorted or curved vision, double vision (diplopia), blurring, visual illusions like floating webs, hairs, or flying insects, reddish hue in vision, and flashes or streaks of light in the visual field.

Considering the etiopathogenesis, *Shodhana* therapy in the form of *Sadhyo Virechana* using *Trivrut Lehya* and *Nasya Karma* with *Anu Taila* is administered. Local treatments (*Sthanik Chikitsa*) such as *Netra Seka*, *Netra Pindi*, and *Netra Tarpana* have also shown beneficial effects in managing the condition.

Sadhyovirechana ; *Virechana* acts as a *Pittarechaka* and *Vataanulomaka*, helping to balance *Vata Dosha* and eliminate excess *Pitta*. It also aids in reducing the fluid accumulation between collagen fibers, thereby enhancing the compactness and structural integrity of the stromal collagen.

Netra Seka: When the medicine is continuously poured over the eyelids for a specific duration, it enhances local circulation and helps strengthen the ocular muscles and nerves. The steady flow of the medicated liquid may also aid in washing away damaged by-products from the corneal surface⁶

Netra Tarpana: *Tarpana* with *Jeevantiyadi Ghrita* is rich in antioxidants, which help reduce oxidative stress and thereby minimize corneal thinning and damage. Since this procedure allows prolonged contact

between the medicine and ocular tissues, it enhances the drug's bioavailability through the corneal surface.⁷

Netra Pindi: The medicine used in *Pindi* is absorbed through the skin of the eyelids, and the warmth (*Ushnata*) generated causes a mild rise in local temperature, leading to vasodilation and improved blood circulation. Additionally, the gentle mechanical pressure exerted by the *Pindi* helps to flatten the corneal curvature, while its therapeutic properties contribute to strengthening the cornea.⁸

Administering Shamanoushadi will stop progression of disease.

Conclusion

Since keratoconus is a progressive ectatic disorder of the cornea, the use of spectacles or contact lenses primarily offers only symptomatic visual correction and does not influence the underlying disease process. In contrast, Ayurvedic management aims at addressing the fundamental dosha imbalance and dhatu dushti, thereby contributing to the slowing of disease progression and alleviation of associated symptoms such as ocular strain, dryness, and visual discomfort. Furthermore, Ayurvedic therapeutic measures lead to subjective improvement in visual quality and patient-reported outcomes. The present case serves as supportive evidence for such subjective visual improvement following Ayurvedic intervention.

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