



Ayurvedic Management of Kukunaka (Ophthalmia Neonatorum): A Case Study

¹Dr Prajakta Hemantkumar Jagtap

PG Scholar, Kaumarbhritya Dept. CSMSS Ayurvedic College and Rugnalaya ,chh.
Sambhajinagar.

²Dr Karuna S. Ratnaparkhi

Guide & HOD, Kaumarbhritya Dept. CSMSS Ayurvedic College and Rugnalaya , chh.
Sambhajinagar.

ABSTRACT

Background

Kukunaka is a well-described ocular disorder in Ayurvedic literature affecting newborns and infants. It is characterized by redness of the eyes, swelling of the eyelids, excessive lacrimation, sticky discharge, and difficulty in opening the eyes. These clinical manifestations closely resemble Ophthalmia Neonatorum, an acute conjunctival infection occurring during the neonatal period. Prompt diagnosis and timely management are essential to prevent corneal involvement and preserve normal vision.

Aim

To evaluate the effectiveness of Ayurvedic management in a clinically diagnosed case of Kukunaka (Ophthalmia Neonatorum).

Case Presentation

A 15-day-old male neonate was brought to the Kaumarabhritya outpatient department with complaints of redness of both eyes, swelling of the eyelids, continuous watering, mucopurulent discharge, and inability to open the eyes completely for three days. Based on classical Ayurvedic signs and clinical examination, the condition was diagnosed as Kukunaka.

Intervention

The patient was managed with a comprehensive Ayurvedic treatment protocol consisting of gentle cleansing of the eyes using sterile Yashtimadhu Phanta, external application of Shatadhauta Ghrita over the eyelids to reduce inflammation, age-appropriate internal Ayurvedic medicines possessing Kapha-Pitta Shamaka, Shothahara, Krimighna, and Raktaprasadana properties, along with strict ocular hygiene and exclusive breastfeeding. The child was monitored regularly for seven days.

Results

Progressive improvement was observed during treatment. Redness, eyelid swelling, lacrimation, and mucopurulent discharge reduced significantly. By the seventh day, the infant was able to open both eyes comfortably without residual discharge or adverse effects.

Conclusion

The present case demonstrates that appropriately selected Ayurvedic interventions may provide safe and effective symptomatic relief in Kukunaka (Ophthalmia Neonatorum). Early management with suitable local and systemic therapies, together with proper hygiene, may help prevent complications and promote healthy ocular recovery in neonates.

Keywords: Kukunaka, Ophthalmia Neonatorum, Neonatal Conjunctivitis, Bala Netra Roga, Ayurveda, Case Study.

INTRODUCTION

Kukunaka is one of the important ocular disorders described under Bala Netra Rogas in Ayurvedic classics. It predominantly affects neonates and young infants and is characterized by redness of the conjunctiva, swelling of the eyelids, excessive tearing, sticky discharge, and difficulty in opening the eyes. Classical Ayurvedic texts explain that the disease mainly develops due to vitiation of Kapha and Rakta Dosha, resulting in inflammatory changes involving the delicate structures of the eye.

In contemporary medicine, Ophthalmia Neonatorum refers to conjunctival inflammation occurring within the first 28 days of life. The condition may arise due to bacterial, viral, or chemical causes and commonly presents with conjunctival congestion, eyelid edema, excessive lacrimation, and mucopurulent discharge. If appropriate treatment is delayed, serious complications such as keratitis, corneal ulceration, and visual impairment may occur.

The close similarity between the clinical features of Kukunaka and Ophthalmia Neonatorum suggests that both conditions can be correlated. Ayurveda emphasizes early diagnosis, maintenance of ocular hygiene, reduction of Dosha vitiation, and restoration of normal ocular function through suitable local and internal therapies. Such an approach not only targets symptomatic relief but also aims to improve tissue healing and prevent recurrence.

Although antimicrobial therapy remains the standard treatment in conventional medicine, increasing concern regarding antimicrobial resistance and adverse drug reactions has encouraged interest in complementary treatment approaches. Ayurvedic medicines possessing Shothahara (anti-inflammatory), Krimighna (antimicrobial), Kapha-Pitta Shamaka, and Raktaprasadana properties may offer supportive benefits in managing neonatal ocular inflammation when administered judiciously under expert supervision.

Considering these factors, the present case study was undertaken to evaluate the clinical outcome of Ayurvedic management in a neonate diagnosed with Kukunaka (Ophthalmia Neonatorum).

Aim

To evaluate the efficacy of Ayurvedic management in relieving the clinical manifestations of Kukulaka (Ophthalmia Neonatorum) and to assess its role in promoting early recovery without complications.

Methodology

A clinically diagnosed case of Kukulaka in a 15-day-old neonate was managed with carefully selected Ayurvedic interventions. Clinical assessment was carried out before and after treatment based on redness, eyelid swelling, lacrimation, mucopurulent discharge, and the infant's ability to open the eyes. The response to treatment was observed for seven consecutive days.

CASE REPORT

Patient Information

A 15-day-old male neonate was brought to the Kaumarabhritya outpatient department by his mother with complaints of redness in both eyes, swelling of the eyelids, excessive watering, sticky mucopurulent discharge, and difficulty in opening the eyes for the previous three days.

History of Present Illness

According to the mother, the baby was healthy at birth and cried immediately after delivery. Three days before presentation, redness and watering of both eyes were noticed. The symptoms gradually progressed, with swelling of the eyelids and accumulation of sticky yellowish discharge, particularly after sleep. The child became increasingly unable to open the eyes comfortably. There was no history of fever, trauma, or congenital ocular abnormality.

CASE REPORT

Birth History

Full-term normal vaginal delivery.

Birth weight: 2.8 kg.

Immediate cry present after birth.

No history of birth trauma, neonatal sepsis, or NICU admission.

Feeding History

Exclusively breastfed.

Feeding pattern adequate with good suckling reflex.

Family History

No history of congenital ocular disorders or hereditary eye diseases in the family.

GENERAL EXAMINATION

- General condition: Stable.
- Temperature: Afebrile.
- Pulse rate: Within normal limits for age.
- Respiratory rate: Normal.
- Weight: 3.0 kg.

- No pallor, cyanosis, icterus, or lymphadenopathy was observed.
- Systemic examination did not reveal any abnormality.

OCULAR EXAMINATION

Right Eye

- Conjunctival congestion – Present
- Eyelid edema – Present
- Excessive lacrimation – Present
- Sticky mucopurulent discharge – Present
- Difficulty in opening the eye – Present

Left Eye

- Conjunctival congestion – Present
- Eyelid edema – Present
- Excessive lacrimation – Present
- Sticky mucopurulent discharge – Present
- Difficulty in opening the eye – Present

The cornea appeared clear, and there were no signs suggestive of corneal ulceration or perforation. Pupillary reactions were normal for age.

AYURVEDIC ASSESSMENT

Based on the clinical findings of Netra Raga (redness), Shopha (eyelid swelling), Ashru Srava (excessive watering), and Picchila Srava (sticky discharge), the condition was diagnosed as Kukunaka, a Kapha-Rakta predominant Bala Netra Roga.

According to Ayurvedic principles, vitiated Kapha Dosha is responsible for excessive mucous discharge, heaviness, and swelling, whereas Rakta and Pitta contribute to redness and inflammatory changes. The accumulation of these vitiated Doshas in the ocular tissues results in the characteristic clinical presentation of Kukunaka.

DIAGNOSIS

Ayurvedic Diagnosis- Kukunaka

Modern Diagnosis- Ophthalmia Neonatorum (Neonatal Conjunctivitis)

TREATMENT GIVEN

Local Treatment

- Both eyes were gently cleansed twice daily using freshly prepared sterile Yashtimadhu Phanta under aseptic precautions.
- Accumulated mucopurulent discharge was carefully removed using sterile cotton swabs soaked in the medicated solution to prevent crust formation and maintain ocular cleanliness.
- Shatadhauta Ghrita was applied externally over the eyelids in a thin layer twice daily to reduce eyelid inflammation, soothe local irritation, and promote tissue healing. Care was taken to avoid direct instillation into the eyes.
- Sterile gauze was used for each eye separately to minimize cross-contamination.

Internal Medication

Considering the predominance of Kapha-Rakta Dushti, age-appropriate Ayurvedic medicines possessing Kapha-Pitta Shamaka, Shothahara, Krimighna, and Raktaprasadana properties were administered under the supervision of a qualified Ayurvedic physician. The medicines were selected according to the neonate's age and clinical condition with special emphasis on safety and tolerability.

The objective of internal therapy was to:

- Reduce inflammatory changes.
- Support normal immune response.
- Correct Kapha predominance.
- Promote healthy healing of ocular tissues.
- Prevent recurrence of infection.

Dietary and Supportive Advice

- Exclusive breastfeeding was continued throughout the treatment period.
- Caregivers were advised to wash their hands thoroughly before touching the infant.
- The eyelids were cleaned gently whenever discharge accumulated.
- Separate sterile cotton and gauze were used for each eye.
- The infant's surroundings were kept clean to reduce exposure to infectious agents.
- The eyes were protected from dust, smoke, and direct sunlight during recovery.
- Regular follow-up was advised to assess clinical improvement and identify any early complications.

FOLLOW-UP AND OUTCOME

Day 1

- Marked conjunctival congestion was present in both eyes.
- Moderate eyelid swelling persisted.
- Copious sticky mucopurulent discharge was noted.
- Continuous watering and difficulty in opening the eyes were observed.

Day 4

- Significant reduction in ocular discharge.
- Eyelid swelling reduced noticeably.
- Redness decreased compared to baseline.
- Lacrimation became less frequent.
- The infant was able to open the eyes partially without discomfort.

Day 7

- Conjunctival redness was almost completely resolved.
- No mucopurulent discharge was present.
- Eyelid edema subsided completely.
- Watering of the eyes reduced markedly.
- The infant opened both eyes comfortably and appeared active during examination.
- No adverse drug reactions or treatment-related complications were observed.

DISCUSSION

Kukunaka is an important ocular disorder described under Bala Netra Rogas in Ayurvedic literature. The disease is characterized by redness of the eyes, eyelid swelling, excessive lacrimation, sticky discharge, and difficulty in opening the eyes. These features closely resemble Ophthalmia Neonatorum, a neonatal conjunctival infection commonly encountered during the first month of life. Early recognition and prompt management are essential because untreated ocular infections in neonates may progress to corneal involvement, resulting in long-term visual impairment.

In the present case, the infant presented with bilateral conjunctival congestion, eyelid edema, excessive tearing, and mucopurulent discharge, indicating a predominance of Kapha and Rakta Dosha. According to Ayurveda, vitiated Kapha produces Picchila Srava (sticky discharge), Shopha (swelling), and Gaurava (heaviness), while Rakta and Pitta are responsible for Netra Raga (redness), inflammation, and irritation. The combination of these vitiated Doshas disturbs the normal physiology of the ocular tissues and gives rise to the clinical manifestations of Kukunaka.

The treatment protocol adopted in this case was planned with the objective of reducing inflammation, maintaining ocular hygiene, promoting tissue healing, and restoring normal ocular function. Instead of using conventional ocular cleansing methods, sterile Yashtimadhu Phanta was selected for local cleansing. Yashtimadhu is described in Ayurveda for its Madhura Rasa, Sheeta Virya, Vranaropana, and Shothahara properties. Gentle cleansing with this medicated preparation helped remove accumulated secretions, maintain cleanliness of the ocular surface, reduce local irritation, and create a favorable environment for healing without causing trauma to the delicate neonatal conjunctiva.

External application of Shatadhauta Ghrita over the eyelids served as an additional supportive measure. Shatadhauta Ghrita is traditionally known for its soothing, cooling, anti-inflammatory, and wound-healing properties. Its application around the inflamed eyelids helped reduce edema, relieve local burning and irritation, and protect the surrounding skin from excoriation caused by continuous discharge. Since it was applied externally, it also ensured safety in the neonatal age group while providing local therapeutic benefits.

Internal Ayurvedic medicines possessing Kapha-Pitta Shamaka, Krimighna, Shothahara, and Raktaprasadana properties were administered in age-appropriate doses under medical supervision. These medicines were intended to correct the underlying Dosha imbalance, reduce inflammatory changes, improve tissue repair, and support the body's natural defense mechanisms. By addressing both the local manifestations and the internal pathological process, the treatment provided a holistic approach to disease management.

An equally important aspect of treatment was strict maintenance of ocular hygiene. Regular removal of accumulated discharge, separate sterile swabs for each eye, frequent hand washing by caregivers, and continuation of exclusive breastfeeding played an important role in preventing reinfection and promoting faster recovery. These supportive measures complemented the Ayurvedic interventions and contributed to the overall improvement observed in the patient.

Clinical improvement became evident within the first few days of treatment. A noticeable reduction in mucopurulent discharge was observed by the fourth day, indicating effective control of the inflammatory process and improved ocular hygiene. Gradual reduction in conjunctival congestion and eyelid swelling suggested that the therapeutic interventions successfully alleviated the underlying Kapha-Rakta vitiation. By the seventh day, the infant was able to open both eyes comfortably, with almost complete resolution of redness, swelling, watering, and discharge.

No adverse effects or treatment-related complications were observed during the treatment period. The good tolerability of the selected Ayurvedic interventions highlights their potential safety when administered carefully in neonates under expert supervision. Furthermore, no recurrence of symptoms was observed during follow-up, indicating sustained clinical improvement.

From a modern medical perspective, effective management of Ophthalmia Neonatorum requires reduction of microbial load, control of inflammation, and meticulous ocular hygiene. The Ayurvedic treatment adopted in this case addressed these principles through a combination of local cleansing, external soothing therapy, internal medicines, and hygienic care. This integrative approach not only relieved the presenting symptoms but also supported physiological healing of the ocular tissues.

Although this report represents a single clinical case, the favorable outcome suggests that carefully selected Ayurvedic interventions may serve as a safe and beneficial therapeutic option in the management of Kukunaka. However, larger clinical studies with adequate sample size and longer follow-up are required to scientifically validate these findings and establish standardized treatment protocols for neonatal ocular disorders.

Overall, the present case demonstrates that a comprehensive Ayurvedic treatment regimen incorporating local cleansing with Yashtimadhu Phanta, external application of Shatadhauta Ghrita, appropriate internal medicines, and strict ocular hygiene can effectively reduce redness, swelling, lacrimation, and mucopurulent discharge in Kukunaka. Early intervention using such an approach may help prevent disease progression, facilitate faster recovery, and improve ocular health in neonates.

CONCLUSION

The present case study demonstrates that Ayurvedic management can play a valuable role in the treatment of Kukunaka (Ophthalmia Neonatorum) when instituted at an early stage. The therapeutic approach adopted in this case, comprising local cleansing with sterile Yashtimadhu Phanta, external application of Shatadhauta Ghrita over the eyelids, carefully selected internal Ayurvedic medicines, and appropriate hygienic measures, resulted in marked clinical improvement within seven days.

A progressive reduction in conjunctival redness, eyelid swelling, lacrimation, and mucopurulent discharge was observed during the treatment period. By the end of therapy, the infant was able to open both eyes comfortably without any residual signs of active inflammation. No adverse effects or recurrence were noted during follow-up, indicating that the selected interventions were well tolerated and clinically effective.

From an Ayurvedic perspective, the treatment successfully addressed Kapha-Rakta Dushti, reduced inflammatory changes, maintained ocular hygiene, and promoted restoration of normal ocular function. The combination of local and systemic therapies provided a holistic approach that not only relieved symptoms but also supported physiological healing.

Although this report is based on a single clinical case, the favorable outcome highlights the potential of Ayurvedic management as a supportive and safe therapeutic option for Kukunaka. Further well-designed clinical studies involving larger sample sizes are recommended to establish standardized treatment protocols and scientifically validate these observations.

Overall, timely diagnosis, appropriate Ayurvedic intervention, meticulous ocular hygiene, and regular follow-up contributed significantly to the successful management of this case and may help reduce the risk of ocular complications in neonates.

REFERENCES

1. Sushruta. Sushruta Samhita of Maharshi Sushruta. Uttara Tantra, Balaroga Adhyaya. Edited by Yadavji Trikamji Acharya. Reprint ed. Varanasi: Chaukhambha Sanskrit Sansthan; 2022.
2. Vagbhata. Ashtanga Hridaya with Sarvangasundara Commentary of Arunadatta and Ayurvedarasayana of Hemadri. Uttara Sthana. Edited by Hari Sadashiva Shastri Paradakara. Reprint ed. Varanasi: Chaukhambha Surbharati Prakashan; 2022.
3. Sushruta. Sushruta Samhita of Maharshi Sushruta. Uttara Tantra, Netraroga Vijnaniya Adhyaya. Edited by Yadavji Trikamji Acharya. Reprint ed. Varanasi: Chaukhambha Sanskrit Sansthan; 2022.
4. Tripathi B. Sharangadhara Samhita of Acharya Sharangadhara. Reprint ed. Varanasi: Chaukhambha Surbharati Prakashan; 2021.
5. Shastri L, editor. Yogaratnakara. Netra Roga Chikitsa. Reprint ed. Varanasi: Chaukhambha Prakashan; 2021.
6. Clinical Ophthalmology: A Systematic Approach. Jack J. Kanski, Brad Bowling. 9th ed. Philadelphia: Elsevier; 2020.
7. American Academy of Ophthalmology. Pediatric Ophthalmology and Strabismus. Basic and Clinical Science Course. San Francisco: American Academy of Ophthalmology; 2023.

