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Case Report

Ayurvedic management of Ulcerative Keratitis – A case report

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ABSTRACT

Ulcerative Keratitis is a sight-threatening corneal infection. It is one of the most common global causes of irreversible blindness due to corneal diseases. This case report highlights the potential of Ayurvedic management in nonresponding ulcerative keratitis. A 20 year old boy came to the outpatient department with redness, discharge, photophobia and defective vision in the right eye since 4 months following a foreign body injury. He was treated at leading ophthalmic hospital for keratitis but due to poor response was suggested keratoplasty and the patient had opted for Ayurvedic treatment. He was initially treated in the OPD and since he started responding well to treatment, he was admitted in the hospital. He underwent *Jaloukavacharana*, *Snehapana*, *Virechana*, *Nasya*, *Anjana*, *Tarpana* and *Putapaka*. He was completely relieved of pain, redness, discharge, photophobia. His BCVA was hand movements at the time of the first visit and it improved to 6/24 at the time of discharge. Ayurveda has an important role to play in infective eye diseases which needs to be explored scientifically.

1. Introduction

Ulcerative Keratitis is the acute or chronic infection of cornea. It is a potentially sight-threatening corneal infection. It is one of the most common global causes of irreversible blindness due to corneal diseases [1]. Initially, it is managed medically and if the treatment fails surgical interventions are considered which include amniotic transplantation and keratoplasty. In this case report, a young man developed ulcerative keratitis as a result of foreign body injury. He was treated in various hospitals but as he was not responding he was suggested keratoplasty. As the patient was unwilling for surgery he opted for ayurvedic management.

2. Case report

A 20 year old boy from a poor economic background presented at OPD of Salakyathantra Department, Tripunithura on 28/03/16 with redness, discharge, photophobia and defective vision in the right eye since 4 months (Figs. 1 and 2). As patient, being uneducated, wasn't completely conscious regarding the history of its onset and previous treatments, it was availed from his ophthalmic report which he had brought with him. According to the reports, four months back patient had a foreign body injury on right eye. He consulted a local hospital and was given an eye ointment. After four days he developed pain and redness of eye. He consulted an ophthalmologist and was put on prednisolone and antiviral drops. Even after 1 w, he did not get any relief. Hence he consulted at a leading ophthalmic hospital. As per the reports from this hospital, there was corneal oedema, thinning and scarring of the right eye. A diagnosis of resolving keratitis was made in the right eye and was advised to continue prednisolone and lubricant drops. After 5 days, a ring infiltrate was found in cornea along with trace hypopyon. A corneal scrapping was done and was found to be sterile. He was started on fortified cefazolin and fortified tobramycin along with atropine drops. There was a response to treatment initally but later on a mild increase in endothelial exudates was noted. Natamycin drops was added to the treatment empirically as the thick exudates were suggestive of fungal pathology. He was advised to undergo therapeutic penetrating keratoplasty. After two days, no relief gained. As patient neither could afford for surgery nor was willing for it he came for finding an ayurvedic solution to it.

Clinical Findings: He was thoroughly examined. His left eye was normal. He had drooping of the eyelid, severe palpebral and bulbar conjunctival hyperemia along with corneal ulcer. His best corrected visual acuity was hand movements in the right eye (Fig.1, Fig.2). On slit lamp examination, infiltrates were seen in the anterior and

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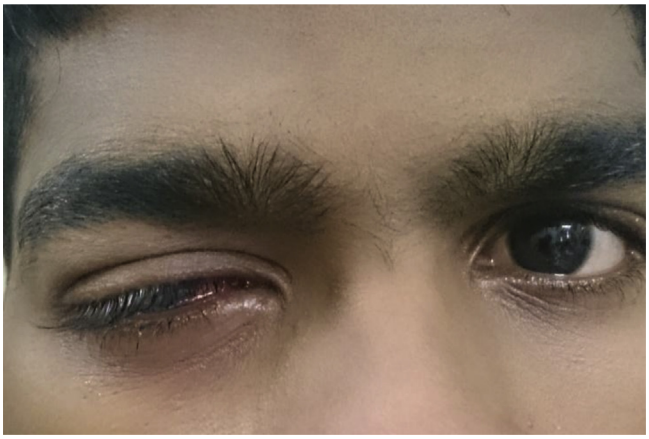

Fig. 1. Day 1.

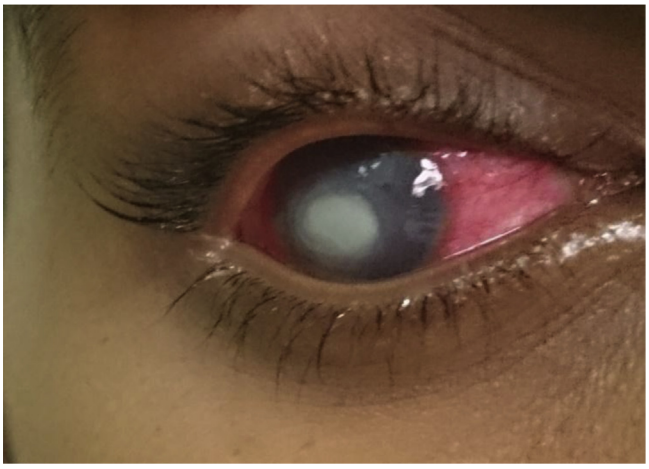

Fig. 2. Day 1.

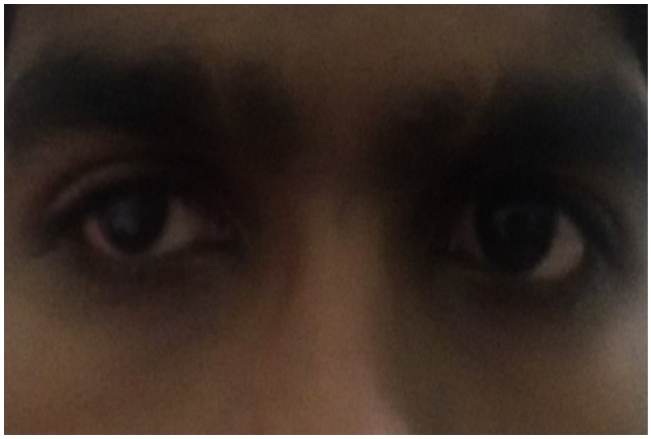

Fig. 3. Day 45.

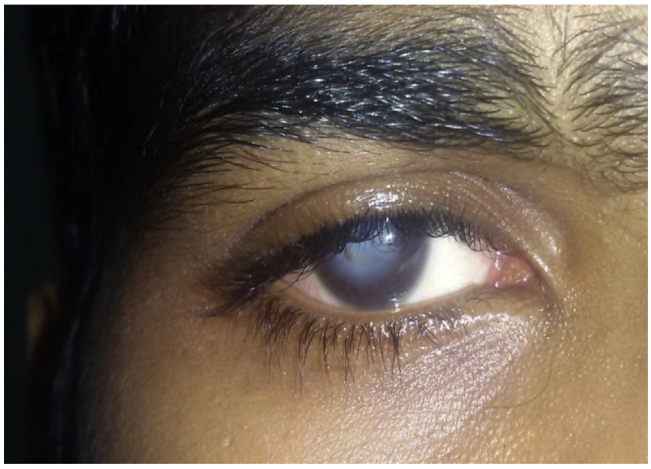

Fig. 4. Day 45.

posterior stroma and also epithelium. On fluorescein staining, ulcer stained indicating epithelial defect. Corneal rescraping was done and the culture again turned out sterile. His best corrected visual acuity was hand movements in right eye and 6/6 in the left eye.

3. Therapeutic Intervention

Therapeutic intervention: The modern topical drugs which the patient was instilling were discontinued, as he was unwilling to continue it. Hence, pure ayurvedic management was adopted. He was initially treated at OPD with *Padolamooladi Kashaya* twice daily and *Kaisora Guggulu* 2 bd along with *Mukkadi Purampada* and *Ulpaladi Seka*. After 1w, patient was slightly better. There was no pain and he was able to open his eyes. But redness, discharge and ulcer persisted. *Jalookavacharana* was done in the right eye. Redness and discharge decreased. After 1 week he got admitted to the hospital. *Jalookavacharana* was done two more times and the internal medicine was continued. After two weeks only slight redness persisted, there was no discharge. *Achasnehapana* was then done with Padoladighrita for 7 days, followed by *Virechana* with *Avipathi Choorna*and *Nasya* with *Anu taila* for 7d. After that A*njana* with *Jatheemukuladi* was done for three days and *Tarpana* with *Jeevaniya Gana Ghrtha* for 7d and *Jeevantyadi Pudapaka* for 1 day. By the end of treatment, the patient best corrected visual acuity was 6/24 in right eye. There was no pain, redness, photophobia nor discharge (Figs. 3 and 4). At the time of discharge, he was advised to take *Padoladi Ghrtha* internally and *Jatheemukuladi Anjana* for three months. After three months, lekhana anjanas were suggested but the patient was not willing to continue treatment. So all treatments were discontinued. The patient was reviewed after one year. His vision remained the same (6/24 in the right eye). The successive order of treatments and its result is tabulated below.

Treatment period	Internal Medications given	Treatment done	Result observed (Right eye)
On OP basis			
28/03/2016 to 04/04/2016	Patolamooladi Kashaya 15 ml bd with 45 ml boiled and cooled water Kaisora Guggulu 2 bd	Mukkadi Purampada local application Ulpaladi Sekam od	Patient slightly better. No pain and he was able to open his eyes. But redness, discharge and ulcer persisted.
12/04/2016	- do-	Jalookavacarana on right eye	Redness and discharge decreased

(*continued*)

Treatment period	Internal Medications given	Treatment done	Result observed (Right eye)
On IP basis from 25/04/2016			
26/04/2016	- do-	Second sitting of jalookavacarana	
03/05/16	- do-	Third sitting of Jalookavacarana	After two weeks only slight redness persisted, there was no discharge. His vision improved to counting fingers – ½ meter.
10/05/16 to 17/05/16	Patoladi Ghruta Accapana		
20/05/16		Virecana with Avipatti Choorna 25 mg early morning	
21/05/16	Rest	Rest	VA 4/60
22/05/16 to 29/05/16		Nasya with Anu Taila	
30/05/16 to 02/06/16		Anjana with Jateemukuladi Varti	
03/06/16 to 09/06/16		Tarpana with Jeevaneeya gana ghruta	
10/06/16		Putapaka with Jeevantyadi putapaka	BCVA – 6/24

4. Discussion

The patient presented with ulcer on cornea, severe pain and redness in the right eye as a consequence of foreign body injury. Hence was diagnosed as a case of *Savrinashukla* [2, uthara tantra 5/4–7] or *Kshathashukla*. Since the patient had only hand movements (*Drishtikrth*), involving multiple layers of cornea (*Dwitwagatham*) and reddish at the periphery (*Lohi thamantha thasacha*), it was to be considered *Varjaneeya* according to Acharyas [3, utharatantra 5/6–7]. Hence the patient was explained the guarded prognosis of disease and was given assurance of reducing pain and redness only. Redness, lacrimation, pain indicated *Amavastha*. Although the disease started as *Aganthu* (foreign body injury), as time passed there was vitiation of *Nijadoshas – Pitha* and *Kapha*. So *Padolamooladi Kashaya* and *Kaisora Guggulu* were given. *Padolamooladi Kashaya* is a *Pitha kapha harayoga* and was selected for *Doshavisodhana*. It pacifies *Pitha* by inducing *Virechana* and *Kha* by its *Rooksha* and *TGeekshnagunas* [3, chikitsasthana19/28–30)]. *Kaisora Guggulu* is *thridoshahara* with indications in *Vrina*, *Kushta* and *Nethrarogas* [4]. *Guggulu* is a drug which possess *Anabhishyandi Snigdha* and *Srothosodhaka* action. Because of the *Srothosodhana* property blood circulation to the site of lesion gets improved that relieved the inflammation. Locally *Ska* was advised with *Ulpaladi* drugs [3, utharasthana 11/31] and *Vidalaka* was done with *Mkkadi Purampada* [5]. *Ulpaladidhara* is *Pithasamana* and *Mukkadi Purampada* helps to relieve redness, pain and oedema.

Savrinashukla is a *Rakthajavyadhi* and *Rakthamoksha* with *Jalouka* is an important treatment [3, utharasthana 11/30]. *Raktha mokshana* is also the treatment of *Aganthujavrinashopha* [3, chikitsasthana 17/41]. Susrutha had advised *Raktha abhishyanda* treatment in *Savrinachikitsa and* also in excessive pain due to *Savrinashukla*, Susrutha had advised *Jaloukavacharana* [2, utharasthana 12/8]. In this case, after *Jaloukavacharana*, the pain and redness were reduced considerably. The saliva of medicinal leech contains hundreds of biological substances which possess analgesic and anti-inflammatory property [6].

When redness, discharge, the pain was cured, the disease was considered to be in *Niramaavastha*. The patient's eye health was poor and needed Tharpana to strengthen the eye. Before that it was decided to give a proper *Shodhana*. Hence *Padoladi ghrtha Snehapana* was done followed by *Virechana* with *Avipathichoorna*. There will be the formation of scar at the site of lesion followed by any wound. Complete regaining of vision will be obtained only after the removal of the scar. *Snehana* is the best method to soften the scar with its *Snigdhaguna*. *Padoladi ghrtha* [3, utharasthana 13/6–9] which is *Pitharakthasamana* with a specific indication in *Sukragatharoga*. It is both *Ropana* and *Rasayana* in nature. *Virechana* with *Avipathi* is *Pitharakthasamana* [3, Kalpasthana 2/ 21–23].

Once the *Kayashudhi* is obtained, the next step is to attain *Uthamanga shudhi*, for which *Nasya* with *Anuthaila* was done. *Anutaila* is *Vatapithasamana* [3, sutrasthana 20/37–38]. The patient's vision gradually started improving. *Anjana* was done with *Jatheemukuladi* for three days [3, utharasthana 11/32]. Because of the repeated *Langhana* procedure like *Jaloukava charana*, there was *Rookshatha* in the eye that got corrected by *Jatheemukuladi anjana* which is *Prasadana* in nature. To strengthen the eye, improve the health of eye, *tharpana* was done with *Jeevantyadi ghrtha* for seven days and *Jeevaneeya Gana Putapaka* was done for a day. By the end of treatment the patient's vision improved considerably. He was able to preserve the vision even after one year.

5. Conclusion

Nonresolving Ulcerative Keratitis of a 20 year old young man was successfully managed with Ayurvedic medicines. The potential of Ayurveda in the management of keratitis has to be explored by conducting clinical trials with large samples so that the utility of medicines can be proved scientifically.

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Conflict of interest

None

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