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**A SINGLE CASE STUDY ON AYURVEDIC MANAGEMENT IN *NAYANABHIGHATA*  
WITH SPECIAL REFERENCE TO EXTERNAL OCULAR INJURY**

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**ABSTRACT**

*Nayanabhighata* (external ocular injury) is considered as a major eye condition which may leads to eye impairment or even blindness. *Nayanabhighata* (external ocular injury) has explained by different *Ayurveda Acharyas* in the context of eye diseases. Very effective treatments are also explained by *Acharyas* by considering the relevance in protecting vision. This study is emphasising the effective management of *Nayanabhighata* (external ocular injury) through Ayurveda in a 28 year old patient came to OPD with a history of injury in eye with a metal rod. The patient had the symptoms like pain, swelling around the eye, reddish discolouration, photophobia, watering along with foreign body sensation. After the thorough examination the case was diagnosed as *Nayanabhighata* (external ocular injury). The patient was treated accordingly with eye bandage and *kriyakalp* (external therapeutic procedure) like *Netra pindi* (medicated paste is tied in a thin cotton cloth or gauze piece and kept over eye) with *Shigru* (*Moringa oleifera*) and *Durva* (*Cynodon dactylon*) and internal medications such as *kashaya* (medicated decoction) of *Draksha* (*Vitis vinifera*), *Guduchi* (*Tinospora cordifolia*), *Punarnava* (*Boerhavia diffusa*.), *Vasa* (*Adhatoda vasica*), *Manjishtha* (*Rubia cordifolia*) and tablet *kaishora Guggulu*. The drugs which are having

anti-inflammatory, anti-microbial, wound healing, analgesics, anti-oxidants properties were selected. The patient completely recovered from all symptoms by the seven days of treatment.

**Keywords:** *Ayurveda, Nayanabhighata, Kriyakalp, Netrapindi, kashaya*

## INTRODUCTION

*Nayanabhighata* (external ocular injury) has explained by ancient *Ayurveda Acharyas*. *Sushruta* has explained *Nayanabhighata* (external ocular injury) in *Uttaratantra* 19<sup>th</sup> chapter. *Sushruta* mentioned *Abhyahatanayana* for *Nayanabhighata* (external ocular injury). And it indicates all kinds of ocular injuries. *Ayurveda* classics have explained any injury to the eyeball will result in swelling, redness of the eye, and pain [1].

*Acharya Delhana* has classified the causes of *Nayanabhighata* (external ocular injury) in to two types. Trauma from visible weapons like stick, blade etc, are described as *Murtha Abhighata*. *Abhighata* due to psychological factors like *Bhaya*, *Soka* etc are described as *Amrutha Abhighata*. These are explained in detail by *Acharya Videha*. According to *Videha* the causes leading to *Nayanabhighata* (external ocular injury) are contact of smoke, dust, bites of insects and mosquitos, contact of toxic materials, trauma to eye during sports and games, excessively awakening at night, excessive fasting, seeing continuously the moving objects, seeing illuminated objects.

There is also reference to dislocation of eyeball due to injury. In *Uttara tantra*, *Acharya Sushruta* has explained about *Atipravistanethra*, pushed eye ball due to injury and also has explained about *Atinirgatanetra*, protruding eye ball from the socket due to any type of injury to eyeball.

In *Sushruta chikitsasthana* the assessment of vision after the injury to eye ball is explained as *Akarmanyam* which is not functioning and *Karmanya* with proper vision. A proper line of treatment is also described for *Nayanabhighata* (external ocular injury) in *Sushruta chikitsasthana*. Application of oils, cold and *Madhura*(sweet) group of drugs are advised to improve the vision and reduce symptoms after injury. The treatments for injury resulting due to excessive sweating, fire, smoke, fear etc are also explained like the same. Fomentation is advised for minor trauma for reducing the pain. The proper placement of displaced eyeball is also explaining [2].

*Nayanabhighata* (external ocular injury) can be correlated with ocular injury. The majority of eye injuries show up as clear redness and pain. A minor puncture, however, will not

cause much redness and go unnoticed. Considering the prevalence of metal strikes, one should use extra caution for getting the proper history. Due to the lack of nerve endings in the lens, retina, and vitreous, an intraocular foreign body may exist without causing any discomfort. Referral to the higher centre is urgently advised if either a retinal detachment or an intraocular foreign body is detected. In order to ease further investigation, it will be advantageous to avoid using ointment in the eye.

It is crucial to keep track of the type of damage, the incident, the time of beginning, and the specifics of the symptoms. For instance, the patient's history of eye diseases, medicine allergies, and tetanus vaccinations are significant regardless of whether the injury was blunt or sharp, burned with acid or alkali, etc. Prompt treatment shouldn't be delayed due to lack of a thorough history. Testing for visual acuity, external examination, pupillary response, extra ocular movement, and radiological investigations can all be used to make an accurate assessment [3].

## CASE REPORT

Presenting history-

A 28 year old male patient from Jambusar, Gujarat came in *shalakya tantra* eye OPD (108) of Parul Institute of *Ayurveda* presented with complaints of swelling around the right eye along with pain, reddish discolouration, foreign body sensation, watering and photophobia from two days. He works in a constructive field as a profession. After getting the full history, it was discovered that the patient had been hurt by a metal rod accidentally before one day. He didn't have any prior therapy; instead of that he used cold packing over the eye.

Past history-

No relevant past history.

No history of diabetes mellitus and hyper tension.

Family history-

Parents are under the medication of hyper tension.

## PERSONAL HISTORY

Appetite	Normal
Sleep	Disturbed from two days
Food	Mixed
Bowel	Normal
Urine	3 to 4 times per day 1 to 2 times per night
Addiction	Nil
Allergy	Nil

**ON EXAMINATION [4]**

- External ocular examination

After taking the history the patient was examined properly.

Examination	Right eye	Left eye
Eye lashes	Normal	Normal
Upper eyelid	Swelling on the upper eyelid	Normal
Lower eyelid	Normal	Normal
Punctum	Normal	Normal
Bulbar Conjunctiva	Sub conjunctival haemorrhage No foreign body seen	Normal
Palpebral conjunctiva	Congestion present No foreign body seen	Normal
Cornea	Superficial corneal abrasion No foreign body seen	Clear
Anterior Chamber	Normal No pus formation	Normal
Pupil	Regular Round Reactive	Regular Round Reactive
Lens	Transparent	Transparent

- Slit lamp examination

Examination	Right eye	Left eye
Eye lashes	Normal	Normal
Upper eyelid	Swelling	Normal
Lower eyelid	Normal	Normal
Punctum	Normal	Normal
Bulbar Conjunctiva	Appearance of micro vessels No foreign body seen	Normal
Palpebral Conjunctiva	Congestion present No foreign body seen	Normal
Cornea	(Examination with Fluorescein dye) staining observed Superficial corneal abrasion near to lateral limbal margin of size 1 mm No foreign body seen	Clear
Anterior Chamber	Normal, No pus and blood accumulation	Normal
Pupil	Regular Round Reactive	Regular Round Reactive
Lens	Transparent	Transparent

After the thorough examination the case was diagnosed as *Nayanabhighata* (external ocular injury) due to metal rod. The patient was advised to admit in the IPD ward of

*shalakya tantra* department for proper treatment.

DOA- 29/6/2022

DOD- 5/7/2022

OPD NO- 22013342

IPD NO-222231

WARD NO-309

BED NO-170

**PLAN OF TREATMENT [5]**

- The patient in this case study experienced symptoms that were predominately related to the *Vata* and *Pitta Doshas*.

- Treatment was administered in accordance with the *Dosha* prevalent.
- The patient was treated with *kriyakalp* (external therapeutic procedures) in addition to internal medications.
- Anti-inflammatory, Analgesic, Vasoconstrictor, and Wound Healing drugs were chosen for the treatment.

**INTERNAL MEDICATIONS [6]**

Medicine	Dose	Time	Days
<i>Kashaya</i> (medicated decoction) prepared with <i>Draksha</i> ( <i>Vitis vinifera</i> ) <i>Guduchi</i> ( <i>Tinospora cordifolia</i> ) <i>Punarnava</i> ( <i>Boerhavia diffusa</i> ) <i>Vasa</i> ( <i>Adhatoda vasica</i> ) <i>Manjishta</i> ( <i>Rubia cordifolia</i> )	60 ml twice daily (Morning, Evening)	Before food	7 days
Tab <i>Kaishora guggulu</i>	2 tab twice daily (Morning, Evening)	After food	7 days

**PROCEDURES [6]**

- The patient was advised with eye bandaging over the right eye for 24 hours (on the first day)
- Advised *Netra pindi* (medicated paste is tied in a thin cotton cloth or gauze piece and kept over the eye) with *Shigru patra Kalka* (*Moringa oleifera*) and *Durva kalka* (*Cynodon dactylon*) thrice daily for 7 days (from the first day for a duration of 40mts).

**PREPARATION OF MEDICINE [6]****Kashaya (medicated decoction)**

- 6 gm of each drug *Draksha* (*Vitis vinifera*), *Guduchi* (*Tinospora cordifolia*), *Punarnava* (*Boerhavia diffusa*), *Vasa* (*Adhatoda vasica*), *Manjishta* (*Rubia cordifolia*) boiled in 480ml of water and reduced to 1/8 th part (60ml)

**Pindi**

- Make *Kalka (paste)* of *Shigru patra* (*Moringa oleifera*) and *Durva* (*Cynodonda ctylon*).
- Applied it over the cotton cloth.

- Kept the cotton cloth over the affected (right) eye for 40mts.

### DRUG REVIEW [7]

Drug name	Rasa	Guna	Veer ya	Vipaka	Karma	Phytochemical Constituents	Property
<i>Draksha</i> (Vitis Vinifera)	<i>Madhura</i>	<i>Snigdha Guru</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Vata Pitta hara</i>	Tannin Tartaric acid Citric acid	Anti-inflammatory Analgesic
<i>Guduchi</i> (Tinospora Cordifolia)	<i>Kashya Tikta</i>	<i>Laghu</i>	<i>Ushna</i>	<i>Madhura</i>	<i>Vata pitta hara</i>	Berberine Tinosporin	Anti-oxidant Anti-inflammatory Analgesic
<i>Punarnava</i> (Boerhaviadiffusa)	<i>Madhura Tikta Kashaya</i>	<i>Laghu Ruksha</i>	<i>Ushna</i>	<i>Katu</i>	<i>Vatakaphahara</i>	Punarnavoside Punarnavine-1	Anti-inflammatory Analgesic
<i>Vasa</i> (Adhatoda Vasica)	<i>Tikta Kashaya</i>	<i>Laghu Ruksha</i>	<i>Sheeta</i>	<i>Katu</i>	<i>Kapha pitta hara</i>	Vasicine Vasicinine B-Sitosterol	Vaso constrictor Anti-microbial Anti-inflammatory
<i>Manjishtha</i> (Rubia Cordifolia)	<i>Tikta Kashya Madhura</i>	<i>Guru Ruksha</i>	<i>Ushna</i>	<i>Katu</i>	<i>Kapha pitta samaka</i>	Quinones Flavonoids	Anti-inflammatory Wound healing
<i>Amalaki</i> (Emblica Officinalis)	<i>Pancha rasa not lavana</i>	<i>Guru</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Tridosha hara</i>	Gallic acid Chebulagic acid	Analgesic Anti-oxidant
<i>Haritaki</i> (Terminalia chebula)	<i>Pancha rasa not lavana</i>	<i>Laghu Ruksha</i>	<i>Ushna</i>	<i>Madhura</i>	<i>Tridosahara</i>	Chebulic acid Tanic acid Gallic acid	Anti-bacterial Anti-oxidant
<i>Vibhitaki</i> (Terminalia bellirica)	<i>Kashya</i>	<i>Ruksha Laghu</i>	<i>Ushna</i>	<i>Madhura</i>	<i>Tridosha</i>	Tannins Ellagic acid	Anti-oxidant Anti-microbial
<i>Gugguluc</i> (Commiphora Mukul)	<i>Ushna</i>	<i>Laghu Ruksha</i>	<i>Ushna</i>	<i>Katu</i>	<i>Tridosha</i>	Triterpenoids Lignans	Anti-inflammation Analgesic Wound healing
<i>Trivrit</i> (Operculina turpethum)	<i>Ushna</i>	<i>Laghu Ruksha</i>	<i>Ushna</i>	<i>Katu</i>	<i>Kapha Pitta hara</i>	B- turpethin Scopoletin Coumarin	Analgesic
<i>Shigru</i> (Moringa Oleifera)	<i>Katu Tikta</i>	<i>Laghu Ruksha</i>	<i>Ushna</i>	<i>Katu</i>	<i>Kapha and vatahara</i>	Leucine Aspartic acid Glutamic acid	Anti-inflammatory Analgesic
<i>Durva</i> (Cynodon Dactylon)	<i>Madhura Kashaya</i>	<i>Laghu</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Kapha pitta samaka</i>	Ferulic Vanilic P-coumaric	Anti-microbial Wound healing

### GRADING OF SYMPTOMS AFTER TREATMENT

Symptoms	Day 0	Day 7
Pain	+++	No pain
Swelling around the eye	++	No swelling
Reddish discolouration	++	No reddish discolouration
Foreign body sensation	Present	Absent
Watering	Present	Absent
Photophobia	Present	Absent

### ON EXAMINATION AFTER TREATMENT

- External ocular examination

Examination	Right eye	Left eye
Eye lashes	Normal	Normal
Upper eyelid	Normal	Normal
Lower eyelid	Normal	Normal
Punctum	Normal	Normal
Bulbar Conjunctiva	Normal	Normal
Palpebral conjunctiva	Normal	Normal

Sclera	Normal	Normal
Cornea	Clear	Clear
Anterior Chamber	Normal	Normal
Pupil	Regular Round Reactive	Regular Round Reactive
Lens	Transparent	Transparent

• Visual acuity

Visual acuity	Right eye	Left eye
D(VA)	6/6	6/6

• Slit lamp examination

Examination	Right eye	Left eye
Eye lashes	Normal	Normal
Upper eyelid	Normal	Normal
Lower eyelid	Normal	Normal
Punctum	Normal	Normal
Bulbar Conjunctiva	Normal	Normal
Palpebral Conjunctiva	Normal	Normal
Sclera	Normal	Normal
Cornea	(Examination with fluorescein dye) No staining observed	Clear
Anterior Chamber	Normal	Normal
Pupil	Regular Round Reactive	Regular Round Reactive
Lens	Transparent	Transparent

• Schiottz tonometry

	Right eye	Left eye
IOP	17 mmHg	17.9 mmHg

RESULTS

- Internal medications and *kriyakalp* (external therapeutic procedures) significantly reduced the patient's symptoms in this case study.
- The medications selected here have anti-inflammatory, analgesic, vasoconstrictor, and wound-healing effects.

- These drug's qualities assisted in the reduction of swelling, pain, foreign body sensation, watering and sub-conjunctival haemorrhage as well as healing of corneal epithelial abrasion.
- In addition to local effect, the *kriyakalp* (external therapeutic procedures) improved the bioavailability of the medication and make the patient recovery easy.

**BEFORE TREATMENT****AFTER TREATMENT****DISCUSSION**

Properties	Drugs	Action on symptoms
Anti-inflammatory	<i>Draksha</i> <i>Guduchi</i> <i>Punarnava</i> <i>Vasa</i> <i>Manjishta</i> <i>Guggulu</i> <i>Shigru</i>	Swelling over the eye reduced
Analgesic	<i>Drksha</i> <i>Guduchi</i> <i>Punarnava</i> <i>Amalaki</i> <i>Guggulu</i> <i>Trivrit</i> <i>Shigru</i>	Pain reduced
Anti-microbial	<i>Vasa</i> <i>Haritaki</i> <i>Vibhitaki</i> <i>Durva</i>	Infection reduced
Vaso- constrictor	<i>Vasa</i>	Sub conjunctival haemorrhage reduced Congestion reduced
Wound healing	<i>Manjishta</i> <i>Guggulu</i> <i>Durva</i>	Healing of corneal abrasion Foreign body sensation reduced Watering reduced
Anti-oxidant	<i>Guduchi</i> <i>Amalaki</i> <i>Haritaki</i> <i>Vibhitaki</i>	Cell deterioration reduced

In this case study, the patient received both internal medications and external procedures. Sixty millilitres of *Kashaya* (medicated

decoction), made with *Draksha* (*Vitis vinifera*), *Guduchi* (*Tinospora cordifolia*), *Punarnava* (*Boerhavia diffusa*), *Vasa*

(*Adhatoda vasica*), and *Manjishta* (*Rubia cordifolia*) was given twice daily before meals. *Draksha* (*Vitis vinifera*) and *Guduchi* (*Tinospora cordifolia*) possess the *vata pitta* hara quality. *Draksha* (*Vitis vinifera*) and *Guduchi*'s (*Tinospora cordifolia*) anti-inflammatory properties helped to lessen the swelling brought on by *abhighata*. The patient's pain is also reduced due to the analgesic properties of *Draksha* (*Vitis vinifera*) and *Guduchi* (*Tinospora cordifolia*). *Punarnava* (*Boerha viadiffusa*) has *Laghu* (lightness) *Ruksha* (dryness) qualities, as well as *vata kapha* hara in action. In addition to providing pain relief, it assisted in reducing swelling. *Vasa*'s (*Adhatoda vasica*) *Sheeta* veerya (cold in potency) gives it the ability to constrict the blood vessels. So it reduced the sub conjunctival bleeding. *Vasa*'s (*Adhatoda vasica*) anti-microbial and anti-inflammatory properties reduced swelling and accelerated wound healing by lowering the chance of progression of infection. Cell rejuvenating property of the *Manjishta* (*Rubia cordifolia*) improved the wound healing in cornea and anti-inflammatory property brings down the swelling due to *Abhighata* [8].

*Triphala*, *Trikatu*, *Guggulu* (*Commiphora mukul*), *Guduchi* (*Tinospora cordifolia*), *Trivrit* (*Operculina turpethum*), *Vidanga*, *Danti*, and *Ghritha* are the key components of

*kaishora Guggulu*. The majority of the elements are *Laghu* (lightness) *Ruksha* (dryness) and *Vata Pitta* hara in action. Due to the presence of ingredients like *Triphala*, *Trikatu*, *Guggulu* (*Commiphora mukul*), *Guduchi* (*Tinospora cordifolia*), and *Trivrit* (*Operculina turpethum*), it is useful in treating all forms of inflammation. In this case, the patient had inflammation related to injury. The anti-inflammatory properties of drugs assisted in reducing the swelling. The primary symptom of all forms of inflammation is pain. Drugs with analgesic properties like *Guduchi* (*Tinospora cordifolia*), *Amalaki* (*Embllica Officinalis*), and *Trivrit* (*Operculina turpethum*), were effectively relieved pain. Drugs like *Haritaki* (*Terminalia chebula*), *Vibhitaki* (*Terminalia bellirica*), *Amalaki* (*Embllica Officinalis*) and *Guduchi* (*Tinospora cordifolia*) prevented cellular deterioration by its anti-oxidant property [9].

In the first day the patient was advised to take eye bandaging for 24 hours. Here *Abhighata* caused corneal epithelial abrasion in the patient. Patching or bandaging is the principal treatment for corneal damage. Because they will contribute to healthier wound healing and will reduce progression of infection. If the eye is open there will be blepharospasm due to foreign body sensation. It will lead to further progression of abrasion and damage to cornea

again. From the second day the patient was advised to stop bandaging as the patient had relief in foreign body sensation and pain and by continuing the bandaging it might not lead to quicker healing of the abrasion.

From the first day the patient was treated with *Netra pindi*. It is a form of procedure in which medicated paste is packed in a gauze piece or thick cotton cloth and putting this over the affected eye. During this procedure the eye will be closed. Mode of action of this therapy follows the transdermal pathway for absorption, as the eye lids skin has a thinner stratum corneum, resulting in reduced impedance which could be a reason for high drug permeation through eyelid skin. This procedure is effective in the patients with ocular injuries due to increased tissue contact time of the medicine. It will help to reduce all the associated symptoms of ocular injury like swelling, pain, haemorrhage etc. Here *Shigru patra kalka* and *Durva patra kalka* is used for the procedure. *Shigru* (*Moringa oleifera*) is *Laghu* (lightness), *Ruksha* (dryness) in property and *sheeta* in veerya. It reduced swelling, congestion, foreign body sensation and watering due to its anti-inflammatory action. Additionally, analgesic properties helped to lessen the pain. Ferulic acid serves as *Durva* (*Cynodon dactylon*)'s primary component. Ferulic acid is anti-oxidant, anti-

microbial and wound healer. In this study *Durva* (*Cynodon dactylon*) helped faster healing of abrasion by preventing infection and deterioration of tissues. By all the treatments planned for seven days the patient got remarkable relief [10].

## CONCLUSION

The patient experienced good result from all the symptoms he had. Internal medications and *kriyakalp* (external therapeutic procedures) treatment planned for seven days significantly improved the patient's condition. Anti-inflammatory medications successfully reduced all of the symptoms, including swelling and congestion. Drugs employed here as analgesics decreased pain brought on by inflammation and injury. The medications which having antimicrobial, anti-oxidant and wound-healing capabilities successfully decreased infection, watering, foreign body sensation and enhanced wound healing. This treatment protocol is emphasising excellent result in the management of ocular injury through *Ayurveda*. Treatments are very affordable to patient and no more side effects. It should be a definite scope for many diseases which haven't yet had a clear treatment protocol [10].

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