



## CORNEAL INJURY - A CASE STUDY

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## ABSTRACT

**Introduction:** Eye being a delicate structure, sometimes even a minor injury may have devastating effects. Due to unprotective measures in daily routine, the incidence of injuries is increasing. Thermal injuries to the eye are ophthalmic emergencies that require immediate management. Delay in treatment can result in deeper penetration and complications. Thermal injuries are usually caused by fire or hot fluids. Prevalence - 3% of emergency visits to eye OPD, the majority of these involve corneal injury. In ayurvedic classics, Nayanabhighata pratishedah adhaya completely deals with ocular injuries which imply the importance of immediate measures and management to be undertaken for the affected eye. **Aim & Objective:** - A case study was taken to understand the efficacy of ayurvedic drugs in the role of thermal injury. **Materials and Methods:** -A 28yr male patient came to OPD with c/o redness of eye, pain, watering of the eye. h/o injury by matchstick (head of the matchstick) while lighting it. O/E revealed burn mark over the cornea, conjunctival congestion, V/A RE-6/6 LE 6/9 blurred, the patient was unable to read because of pain, rest of the Ocular examination was normal. **Discussion:** -Patient had immediately wash the eye with water continuously for half-hour then visited our OPD, so we started aschyotana with honey, and lid closure was maintained for 1hour, ophthocare drops were given 1drop every 2 hourly. **Conclusion:** - Significant changes were observed, the burn mark over the cornea was completely healed by the 8th day. Even though epithelial layers heal by themselves, timely management appropriate diagnosis help to resolve the injuries.

**Keywords:** Thermal burn injury, matchstick head, corneal injury, Ayurvedic management.

## INTRODUCTION

The morbidity from corneal injuries greatly varies, from minor and insignificant to vision threatening, Thermal injury comes under the exposure related Injury. Prevalence - 3% of an emergency visits to eye OPD, majority of these involve corneal injury<sup>1</sup>. In ayurvedic classics, Nayanabhighata pratisheдах adhaya completely deals with ocular injuries which imply the importance of immediate measures and management to be undertaken for the affected eye.

**Aim & Objective:** - A case study was taken to know the efficacy of ayurvedic drugs in corneal thermal injury.

**Materials and Methods:** - we present a case of ocular thermal burn from a accident where the head of match stick struck the corneal surface while lighting it. Patient came to our OPD with complaint of redness of the eye, pain, and watering of the eye. Examination of the patient revealed burn mark over the cornea, conjunctival congestion, V/A RE-6/6 LE 6/9 blurred, the patient was unable to read because of pain, rest of the Ocular examination was normal

### Grading of Ocular Surface Burn<sup>2</sup>

SL.no	Grade prognosis	Clinical findings	Conjunctival analog involvement scale
I	Very Good	0 clock hours of limbal involvement	(0%) 0/0%
II	Good	≤3 clock hours of involvement	≤ (30%) 0.1-3/-29.9%
III	Good	>3-6 clock hours of limbal	>30-50% ,3.1-6/31-50%
IV	Good to Guarded	> 6-9clock hours of limbal involvement	>50-75% 6.1-9/51-75%
V	Guarded to poor	>9-<12 clock hours of limbal involvement	>75-<100% 9.1-11.9/75.1-99.9%
VI	Very Poor	Total limbus 12 clock hours	100% 12/100%

## DISCUSSION

Thermal ocular burns rarely result in permanent damage. Management of ocular burns is started imdeatly after the injury with copious irrigation. Patient had immediately washed the eye with water continuously for half-hour then visited our OPD, so we started aschyotana with honey, and lid closure was maintained for 1hour, ophthocare drops were given 1 drop every 2 hourly.

Thermal injury is an oxidative injury, there is increased free radical activity at the site, resulting in increased lipid peroxidation, which is responsible for scarring and contractures. In burns, the early

application of honey mops up the free radicals and reduces such scarring and contractures<sup>3</sup>.

Topical application of honey to injured cornea resulted in faster epithelial healing<sup>4</sup>. Ophthocare drops-*Madhu*, *Amalaki*, *Haridra* has antimicrobial action, *Haridra* and *Tulasi* have Anti-inflammatory action and analgesic, *Yavani* and *Haridra* possess Antihistaminic action, *Amalaki*, *Haridra*, *Bibitaki*, *Satapatri* and *Karpoora* has Antioxidant properties<sup>5</sup>. Epithelial wound healing-The process of Corneal epithelial wound healing can be divided into phases that occur in sequence but may overlap in time. They are latent phase, migration, proliferation, epithelial reattachment<sup>6</sup>



## CONCLUSION

Transparent cornea, which is necessary for a good and clear vision can be damaged with thermal burn. Marked improvement was seen over the cornea, burn mark was completely healed by the 8th day. Corneal healing mechanism are placed to aid in proper repair and preservation of corneal structure after injury. Timely management appropriate diagnosis help to resolve the injuries.

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