Review Articles

A comprehensive review of Cataract *(Kaphaja Linganasha)* and its Surgical Treatment in *Ayurvedic* Literature

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Abstract

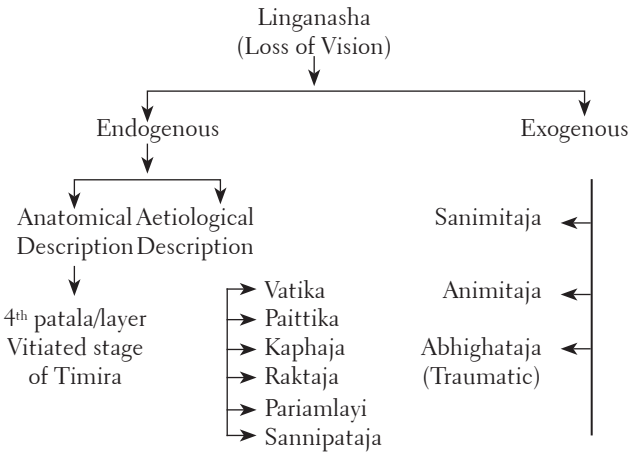
Ayurveda the science of life, since its origin is serving the mankind throughout in health & disease state of life. *Shalakyatantra,* one of its specialized branch deals with the science of Ophthalmology, Otorhinolaryngology, Orodental surgery & Head; was contributed and developed by *Rajrishi Nimi,* the King of *Videha ,* who was a colleague of *Atreya, Punarvasu, Dhanwantri, Bharadwaja, Kashyapa* etc. The available literature related to this speciality is reproduced from original text of *Nimitantra* in *Uttartantra* of *Sushruta samhita.* So *Rajrishi Nimi* deserves all the credit and regards for *Shalakyatantra* and for being the first eye surgeon on this earth. The fact regarding the technique of cataract surgery adopted by ancient surgeons is still a matter of debate. Most of the medical fraternity accepts cataract surgery of ancient surgeons as couching procedure but after going through forth coming pages, the prevailing concept will prove to be a myth. It started with extra capsular extraction through small incision during the period of *Sushruta Samhita* but later shifted to couching like technique by *Acharya Vagbhatta.* Secondly, the objective of this literary research paper is to find proper co-relation of the disease cataract to those mentioned in Ancient *Ayurvedic* classic. *Linganasha* has been inadvertently taken as cataract but this is neither logical nor in accordance with classics. We find detailed description of cataract's differential diagnosis, indications, contra- indications, pre/intra/post operative procedures and complication in ancient texts of *Ayurveda.* Not only this, vivid description of treatment of various complications of cataract surgery are also given. Needless to say, no other surgically treatable diseases & its complications except *Kaphaja Linganasha* are given this much attention.

Key words: *Linganasha, Shalaka, Vedhana, Daivakrita, Lekhana, Aschyotana, Lepa, Seka*

Introduction

Linganasha is a technical descriptive term in Ayurvedic literature, which means loss of vision. *(Dalhan)*[1]. Two varieties of *Linganasha*- loss of vision have been described i.e. reversible and irreversible or curable and incurable. On the other hand *linganasha* as a whole can be classified[2] as follows:

Endogenous *linganasha* is described vividly on anatomical and etiological grounds and is said to be the end stage of Timira, a serious disease of the visual apparatus. On



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DOI: 10.4103/0974-8520.68197

anatomical descriptive grounds, when the vitiated body humours reach/invade 4th/last patal/layer of the eye ball (nucleus of the lens), then patient's vision is obstructed, pupil is covered by vitiated body humours then patient perceives only bright illuminating objects that too when the eye (Posterior segment) is normal. This stage of *Timira*; invading 4th patal (Lens) is labelled as *linganasha* (Cataract). According to the etiological classification, *linganasha* is again the 3rd stage of disease Timira, 2nd being Kaach-(ISC).

The clinical picture is as per the vitiating / causative body humours. Among these pathologically classified *linganasha* only *Kaphaja linganasha* (KL) is surgically curable rest all being incurable[3 & 15] but a misconception about the surgical procedure is still prevailing. The western medical literature considers that surgical procedure depicted in ancient surgical treatise *Sushruta Samhita* is couching[14/1] i.e. displacing the mature catractous lens in capsular bag into the vitreous cavity. This fact is partially expounding the Ayurvedic view point because the said treatise encompassing the view point of *Rajrishi Nimi* of *Videha* Kingdom holds a very different explanation. The available description therein is very similar to that of extra capsular cataract extraction that too with a small incision. On the other hand in the later surgeon *Acharya Vagbhatta's* (5thAD) technique is very near to the of couching.

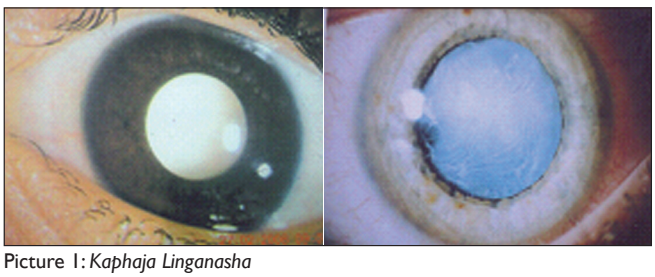
To explore the facts in this regards and to put forth the correct view point of Ayurveda this literary research was under taken.

Aims and Objects

1. To review the literature on *KL* and cataract to establish their relation.
2. To explore there from the surgical method & procedure adopted by ancient scholars.

Material and Methods

Classical literature on the subject from *Ayurvedic* and western system of medicine were explored thoughly and where felt necessary help of Sanskrit grammar scholars was taken. The collected classical material was compared and put forth in a systematic manner in the coming pages.



Picture 1: *Kaphaja Linganasha*

Clinical picture of *Kaphaja linganasha*[4] is as follows

- Complete obstruction of vision; the patient can only perceive bright light /object.
- Pupillary circle appears to be thick, smooth, and white in color like a white drop of water (fluid) moving on lotus leaf.
- Pupil constricts in sun and dilates in shade/dark (+ve Pupillary reaction).
- Pupillary circle is mobile/changes its shape on ocular massage.

These clinical features of *Kaphaja linganasha* invading fourth patala (Lens) exactly simulate the picture of mature/hypermature senile cortical (Cuneiform) cataract, the white and soft cataract.

Exogenous variety of *Linganasha* (Vision loss)-*Sanimitaja and Animitaja* types are classified according to known and unknown (idiopathic) exogenous causes respectively. In both these varieties the pupillary circle remains clear, like natural one i.e. jet black in colour[5]. Both are incurable. Trauma also leads to irreversible loss of vision.

Indications for surgery

1. Well developed *Kaphaja linganasha* i.e. fully mature/ hypermature cortical cataract with clinical features mentioned above.
2. Uncomplicated cataract[16] e.g. *Avartaki* etc. following Six complications of *Kaphaja linganasha* are to be avoided before surgical intervention:
   a. *Avaratki:* Pupillary circle appears like whirlpool, hyper- reactive, of reddish white colour.
   b. *Sharkara:* Where *linganasha*-cataract appears like that of coagulated milk i.e. calcified cataract.
   c. *Rajimati:* When cataract's anterior surface is seen with linings i.e. anterior capsular calcification or hard cataract.
   d. *Chhinanshuka:* Pupil is irregular, with tears, charred coloured and painful; i.e. cataract with uveitis and posterior synechiae.
   e. *Chandraki:* Pupillary area reflects off- white color and its shape is like that of moon; i.e. cataract with retinal detachment.
   f. *Chhatrki:*The pupillary area (Cataract) is multicolored like that of mushroom i.e. posterior segmental pathologies.

Contra- indications of surgery

A) Related to cataract (*Kaphaja Linganasha*[6])

- Pupillary Appearance:
  - Half moon shaped pupil-posterior subluxated lens
  - Drop of sweat-anterior dislocation of lens
  - Pearl shaped-shrinked lens
  - Hard cataract

- Irregular shaped
- Having streaks-calcified
- Thin from the centre.
- Multicolored
- Blood or abnormal material in pupillary area

- Painful eye
- Immature cataract.

B) Related to patient[17]:

Those patients who are contraindicated for venesection-blood letting i.e.

- Having anasarca, anaemia, hemorrhoids, abdominal distension, <16 yrs, pregnant woman with oedema, old age, post partum stage, without oleation and sudation, after *Pancha Karma* therapy, neurological & bleeding disorders, diarrhoea, dysentery and apprehensive to surgery[8].
- Patients suffering from excessive polydypsia (Hyperglycemic) sinusitis, bronchitis, indigestion, vomiting, headache, otalgia, ocular pain, and oedema[8].

C) Related to time and place[17]:

- Excessive Hot or cold season/atmosphere.
- Cloudy or windy atmosphere.

Pre-operative steps/measures:

Preparation of patient[9]:

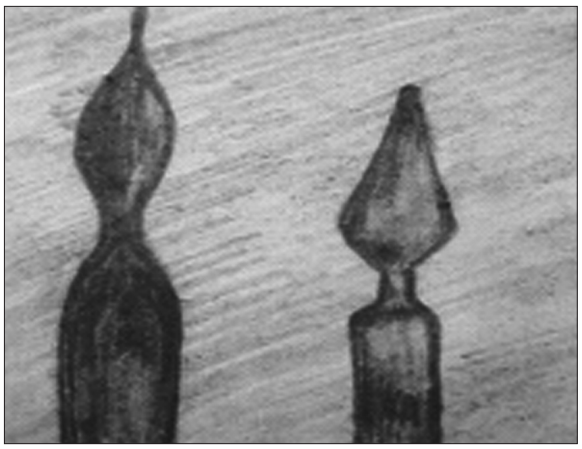
a. *Snehan* (Oleation).
b. *Swedan* (Sudation).
c. *Virechana* (Medicated purgation).
d. *Ghrita* mixed food.
e. *Tarpana* of head-by *abhyanga* (massage).

Preparation and collection of required materials[7]:

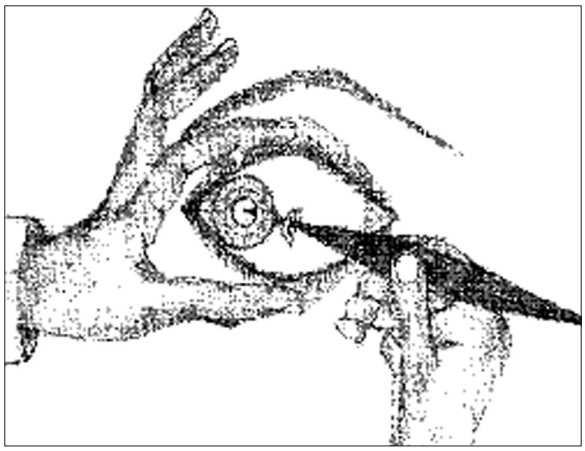
1. Yav-vakra shalaka[18] having following qualities:
   a. Length-8 angul; i.e.6 inches.
   b. Wrapped in center with thread for proper grip.
   c. Thickness equal to thumb.
   d. Both ends shaped like flower-bud.
   e. Made up of copper, iron/gold.
2. *Vetas-patra Shastra* for Scleral incision.
3. Mother's milk/Goat/Cow milk.
4. *Ricinus communis* leaves.
5. Arrangement for heating.
6. *Ghrita*.
7. Decoction of *vata*-pacifying drugs e.g. *R.communis* leaves and roots, *Dashamoola Kwatha*.
8. *Ghrita* medicated with *Glycyrrhiza glabra* decoction
9. *Vastra Patta* (Bandage).
10. *Pichu* (Cotton).
11. Cloth for poultice (sudation).
12. Calm, brave, strong, devoted attendants to hold & assist the patient during the procedure.

Operative procedure[7]:

- Fix a particular date and time for the operation and pay prayers to the God.
- Make the patients sit in O.T. with extended legs, hands resting on seat, hyper extended neck-facing sun (light) in the forenoon. The attendants should make patient sTable
- Surgeon should sit in front of the patient at a convenient height and posture.
- Eye to be operated upon is given mild sudation and lids fixed with thumb and index fingers. Patient is asked to continuously look towards his nose.
- Surgeon should hold the *shalaka* (*linganasha vedhani shalaka*) steadily in Right Hand (Gripped with thumb, index and middle finger) and enter the left eye at *Daiva Krita Chhidra* i.e. keyhole (2/3 parts from *Krishna-shukla sandhi* and 1/3 parts from the *Apang sandhi* in the interpalpebral space). The *Shalaka* should be introduced in the eyeball by rotatory movements; a specific sound of entry of *Shalaka* inside the eye is experienced which follows a drop of water (Aqueous humour) through the vedhana site.
- Steadily pushing forward & manipulating the *shalakya* until it reaches the *drishti mandala*



Picture 2: Yav-vakra shalaka



Picture 3: Linganasha Vedhana Procedure

(papillary aperture) i.e. on ant surface of the cataractous lens so that *lekhana karma* is completed under direct vision.

Shalaka is to be gripped in left hand for operation on right eye.

- Hold the entered *shalaka* in situ and irrigate the eye with mother's milk (Human milk) and apply mild sudation on the closed eye with *Vata* pacifying leaves e.g. *R. communis* leaves. This will prevent redness, discharge and pain.
- There after assuring the patient, push the *shalaka* to the centre of pupil through rotatory movements. Incision at *vedhana* site (key hole) should be given before entry of *Shalaka* (as suggested by a traditional *Netra vaidhya* in National seminar on *netra chikitsa*-96 held at GAMC Bangalore).
- With the tip of the *shalaka* in pupillary aperture, *Kaphaja Linganasha* (Cataract) should be scraped properly to disintegrate the organized material.

To remove this disintegrated cortical/ nuclear matter, Close the nasal cavity opposite to the operated eye and ask patient to forcefully sneeze out through the open nare (ipsilateral to the eye being operated) while keeping the *shalaka* inside the eye. This will aid drainage of the liquefied cortical matter (by increasing the JVP and in turn increasing IOP.)

Acharya Vagbhatta[26] varies in its technique at this step of surgical procdure. He is of the opinion that ask the patient to see towards ground and gently push the cataract downside without any delay, then ask the patient to sneez (as above) so that cataract goes down enough leaving the pupillary aperture (*Drishti Mandala*) clear.

- If the cataract is not completely scraped and extracted out or if it re-occurs (After-cataract) then irrigate the eye again with mother's milk, apply sudation (asearlier) and rescrap the cataract (in pupillary area).
- When by doing this procedure the pupil become clear of all *kapha*/white material-Cataract (like sky clear of clouds) and patient starts seeing fingers threads like objects then *shalaka* should be slowly removed by rolling out movemnts.
- Apply pure ghee in eye and apply the bandage.

Post Operative measures[8]:

A) Regimen of patient:

1. *Place of patient's rest:* In a House/ward which is clean and tidy, made on suitable land, devoid of dust, smoke, blowing wind and direct sunshine.

   Bed should be comfortable, of proper length and width, so that patient can do movements comfortably, with, soft mattress covered by clean bed sheet with Pillow facing east with some sharp weapon underneath it.

2. *Posture of patient in bed:* If left eye is operated lie in right lateral position or vice-versa and if both are operated lie in supine position.
3. Patient should listen to pleasing stories etc.
4. *Contraindications*[11]:
   - For 3 days patients should avoid eructation, sneezing, coughing, spitting, trembling and excess movements.
   - For 7 days, head bath, heavy food, *Datun* (tooth Brush), but should take mouthwash/ *manjan* for oral hygiene, *adhomukh- shayan* (lying in prone position).
5. *Diet* [10 & 19]
   a. Light, easily digestible food in proper quantity.
   b. Semi-liquid diet mixed with *Trikatu (Zingiber officinale, Piper nigrum, Piper longum), Embelica officinalis, Sneha (Ghrita)* and Salt.
   c. Porridge and *Vilepi*.
   d. Soup of meat of animals of *Jaangal* regions e.g. deer etc. and decoction of *Leptadenia reticulata*.
   e. Food along with medicated milk (medicated by *Vata*-pacifying drugs).
6. *Massage* of *ghrita* on head and feet everyday.

B) Wound care [11 & 20]

1. Open the bandage after 3 days
2. Irrigate eye with decoction of *Vata* pacifying drugs e.g.
   i) Milk (or *Ghrita*) cooked with soft leaves of *Ricinus communis*.
   ii) Milk medicated with *Laghu Pancha moola*.
3. Mild sudation of eyes to allay the fear of *Vata*-alleviation.
4. Bandage again.
5. For 7 days, continue same steps of irrigation and re-bandaging every day.
6. Avoid the bandage on 7th or 10th day.

C) Iatrogenic and Improper post-operative care related complications

1. *Raga* (Redness).
2. *Paka* (Inflammation).
3. *Vriddhi* (Growth).
4. *Daha* (Burning sensation).
5. *Granthi* (Cystic swelling).
6. *Vakra netra* (Squint due to muscle trauma).
7. *Adhimantha* (Uveitis / Secondary glaucoma etc.)

D) Measures taken in care of certain persistent problems

1. *If pain and redness persist* [21]:
   i). *Aschyotana* (medicated eye drops):
      a. Goat's milk medicated with *Glycyrrhiza glabra, Vitis vinifera, Symplocos racemosa* and *Saindhva lavana.*

b. Goat's milk medicated with *Glycerrhiza glabra, Nelumbo nucifera, Saussurea lappa, Vitis vinifera, Laakh* and *Khaand.*
c. Goat's milk mixed with *sandhava lavana*.

ii) *Lepa* (paste-application on head and face):
a. *Ghrita* mixed with paste of *Geru, Hemidesmus indicus, Cynodon dactylon, Yava*.
b. Lemon juice mixed with roasted *Sesamum indicun* and *Brassica compestris*.
c. *Hemidesmus indicus, Glycerrhiza glabra, Rubia cardifolia, Cinnamon tamala, Ipomoea digitata*, ground with goat's milk.
d. *Zingiber offcinale, Cedrus deodara*, wood of *Prunus cerasoides*.

iii) Use of medicated *ghrita* orally, as nasal drops and for irrigation.*Ghrita* medicated with "*Vatsakadigana*".

iv) *Siravedha* (Venae puncture).

v) Treat like *Adhimantha*- acute angle closure glaucoma and acute iridocyclitis.

Table 1: Complications due to defect in Shalaka[12&22] (*Improper surgical instruments)*

S. No.	Defect in Shalaka	Features
1.	Brittle	Ocular pain
2.	Rough	Intra ocular pain
3.	Blunt tipped	Big ocular wound
4.	Very sharp	Multiple wounds, intraocular wound
5.	Irregular/uneven	Lacrimation
6.	Malleable	Lacrimation
7.	Very thin	Anterior chamber dislocation
8.	Blunt	Pain, Difficulty in procedure.

Management[13]

Following line of treatment is followed in all these complications:

1. *Lepa* on eye (Enointing): For pacifying pain and redness.
   a. Luke warm paste of red ochre, *Hemidesmus indicus, Cynodon dactylon*, grinded finely in *ghrita* and milk and heated on fire.
   b. Luke warm paste of mild roasted *Sesame*

Table 2: Complication due to improper site of Vedhana[14&23] (Surgical Intervention) & their Management

S.N.	Site of Puncture	Features	Management
1.	Any site other than *daivkrit chhidra* (i.e.key hole or least vascular area)	- Injury to blood vessels - Haemorrhage - Pain	1. *Seka* (irrigation) of eye by mother's milk and *ghrita* medicated with Glycerrhiza glabra paste/ decoction 2. Cautery in temporal region
2.	Puncture towards temporal side	- Pain - Inflammation - Redness - Lacrimation - Pricking sensation - Gets torn from above etc.	1. Sudation-Above centre of eyebrow. 2. Cautery- Above centre of respective eyebrow. 3. Intake of hot *ghrita* 4. Fasting 5. Intake of *ghrita* and cow's urine
3.	Puncture very near to *Shukla-Krishna Sandhi* (Cornea)	- Redness - Inflammation - Improper healing - Pupil gets covered with blood which deposit there. - Pupil becomes indistin - Guishable from iris.	1. Medicated purgation 2. *Netra Seka* by luke warm *ghrita*. 3. Blood letting
4.	Puncture above the indicated site	- Increase in ocular pain and discomfort.	1. *Netra seka* by luke warm *ghrita*. 2. *Vata*-pacifying Rx for allaying pain.
5.	Puncture much below the indicated site	- Pain - Lacrimation - Redness - Slimy, mucilaginous discharge after drawing out shalaka (vitreous prolapse) - Inflammation in eyeball - Pthisis bulbi	1. *Netra seka* by luke warm ghrita. 2. Medicated purgation 3. Blood letting 4. According to *Vagbhatta* the condition is incurable but steps should be taken to prevent eyeball from suppuration.

Table 3: Latrogenic complication and management[24]

S. No.	Improper movement of Shalaka	Features	Management
1.	Unstable movement	* Constriction/relaxation of pupil * Piercing/pricking pain	a. Blood letting by Jalauka *(Hirudinaria granulosa)*. b. *Seka-ghrita* medicated with leaves of *Glycyrrhiza glabra and Trichosanthus dioica*
2.	Excessive upward movement	* Redness * Excessive pain	a. Fasting. b. Seka (irrigation) with luke warm ghrita.
3.	Excessive downward movement	* Pain * Haemorrhage	a. Blood letting. b. *Seka-ghrita* medicated with leaves of *Glycyrrhiza glabra and Trichosanthus dioica.*
4.	Pupil damage	* Haemorrhage	a. *Seka with-Ghrita manda*. b. *Anuvasana-vasti* with *ghrita manda*.
5.	Piercing opposite to site of puncture. (Damage to ciliary body)	* Haemorrhage * Chromatopsia	a. Seka with ghrita. b. Fasting. c. Blood letting-by *Hirudinaria granulosa.*

Table 4: Certain intra operative complications of lingnasha (cataract) surgery & their management

S.No.	Complication	Features	Management
1.	*Sfutan* (bursting)	Cataract breaks in multiple fragments on being touched by shalaka.	1. Sudation by poultice of paste of *Ricinus communis* leaves and extraction of broken pieces one by one.
2.	*Avgalan* (Falling down)	Dislocation into posterior segment	1. *Seka*-by mother's milk. 2. *Avpidan nasya-Zingiber officinale* and jaggery. 3. Blood letting- By *Jalauka* (*Hirudineria granulosa*).
3.	*Vistaran* (Spreading)	Spreading/dispersion of liquefied cataract.	1. Sudation on face-by cloth dipped in luke warm water. 2. *Pratimarsh nasya* (nasal drops) *Ghrita manda*.
4.	*Utplavan* (Leaping-up)	Dislocation into Anterior chamber	1. Sudation on face by cloth soaked is luke warm water. 2. Frighten the patient. 3. Sprinkle cold water. 4. If *lingnasha* is stationary or mobile do sudation by *vata* pacifying group of leaves. 5. If problem persists (a) *Snehpan, Snehan nasya*. (b) Blood letting. 6. If it still persists then cautery above center of respective eyebrow.
5.	*Vileenta* (Disappear)	On being scrapped by *shalaka, lingnasha* disappears in Pupillary area.	1. Sudation - *Nadi sweda* by milk 2. *Pratimarsha Nasya* by mixture of *ghrita, Glycerrhiza glabra* powder and *Anethum sowa* powder.

indicum and *Brassica campestris* grinded with *Citrus medica* juice.

c. Luke warm paste of *Hemidesmus indicus*, *Cinnamomum tamala*, *Glycerrhiza glabra*, and *Rubia cardifolia* in equal quantity ground with goat's milk.

d. Luke warm paste of *Berberis aristata*, *Zingibar officinale*, *Prunus cerasoides* ground in milk.

e. Luke warm paste of *Vitis vinifera*, *Glycyrrhiza glabra*, *Saussurea lappa* and *Saindhava* (Salt) ground with goat's milk.

2. *Seka* (ocular irrigation):

(A) *For allaying pain and redness:*

i) Goat's milk boiled with paste/decoction of *Glycyrriza glabra*, *Saindhava*, *Symplocus racemosa*, *Vitis vinifera.*

ii) Goat's milk boiled with paste/decoction of *Saussurea lappa*, *Vitis vinifera*, *Laakh*, *Glycyrrhiza glabra*, Sugar, *Saindhava*, *Nymphaea stellata.*

(B) *For allaying pain and burning sensation:*

Goat's *ghrita* cooked with goat's milk along

with. Paste/decoction of *Prunus cerasoides*, *Uraria picta*, *Asparagus* racemosus, *Cyperus rotundus*, *Emblica officinalis*.

3. *Lepa, Anjana and Seka:*
   Goat's *ghrita* processed with goat's milk along with paste of *vata* pacifying *Cedrus deodara* etc. drugs and four time paste of "*Kaakolyadigana*" herbs should be used for anointing and irrigation.
4. *Blood letting:*
   If ocular pain persists, then *snehan* (oleation), *svedana* (sudation) and blood letting from veins of temporal or frontal region.
5. *Agnikarma (Moxibustion)* on temporal or frontal area (above centre of respective eyebrow).

Discussion

Linganasha is one of the major causes of blindness, which can be either reversible or irreversible depending on its type. *Kaphaja Linganasha* is the only surgically treatable type, rest all being incurable. The indicated site of puncture/incision for *linganasha*/Cataract surgery is *Daivakrita Chhidra* (Key hole), which is the junction of medial 2/3rd and lateral 1/3rd of the area between limbus and outer canthus in interpalpebral space. On measuring this area with Vernier calliper, it is found to be 9 mm on an average. Thus the *Daivkrita chhidra* (natural point) should be about 6 mm away from the limbus on temporal interpalpebral area. These measurements correspond with Pars plana, the site which is least vascular and devoid of retinal tissue and also the preferred site for intra ocular (posterior segment) approach to the eyeball.

The shape of *linganasha Vedhani shalaka* is like the flower bud of Jasmine i.e. round, spindle shaped with narrow petiole like base. Such a shape ensures spontaneous and effortless exit of cortical matter from the sides of the neck of *Shalaka* through wound gap made by wide spindle shaped tip of the *shalaka*, when the scrapping is being done. This technique given in *Sushruta Samhita* (reproduced from *Nimitantra*) closely resembles to extra-capsular cataract extraction.

On the other hand description available in the *Vagbhatta Samhita* regarding this surgical step differs and is similar to the couching procedure.

After proper *lekhana karma* (scrapping), a JVP raising maneuver is done i. e closing Nostril opposite to the eye being operated and forcefully sneezing out through the ipsilateral nostril which consequently raises the IOP and facilitates spontaneous exit of scrapped/liquefied lens matter through the incision.

A detailed & critical account related to postoperative care & management of various complications (if arise) of cataract surgery has been given in *Ayurveda* literature which clearly emphasize that a utmost care in the selection of the patient, pre-operative, operative and post- operative as well as complications if any have been taken.

Conclusion

Kaphaja Linganasha seems to be the proper word to be used for the eye disease- Cataract in modern medical science. *Rajarishi Nimi*, the king of *Videha*, who is the original contributor to the science of ophthalmology since the origin of *Ayurveda*, should be given a due credit that he rightly deserves.

The detailed description of surgical procedure of the ancient eye surgeons of India is suggestive of small incision extra- capsular cataract extraction by temporal approach as per the description available in the *Sushruta Samhita* (view point of King of *Videha-Rajrishi Nimi*). On the other hand couching was a later development in the surgical technique of cataract around the period of *Acharya Vagbhatta*. Couching technique being easy and time saving, remained in practice till mid of the 20th century in many tribal areas of the country.

Some surgeons opines this procedure as pars plana lensectomy; but in that case this should have been referred as AA*harana karma* (extraction) and there would have been no reference of *Punah linganasha* (after cataract) as an complication.

A comprehensive and systematic account of pre-operative preparation, operative, technique and postoperative care of the patients and the surgical wound has been given by the ancient surgeons. Besides this, various iatrogenic and postoperative care related complications has been vividly detailed along with their management. Thus the surgical treatment of cataract was selective, systematic and in continuous process of transition since its recognition as major catastrophe in the literature of Ayurveda.

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हिन्दी सारांश

आयुर्वेद में कफज लिंगनाश–कैटरेक्ट एवं उसकी चिकित्सा पर समीक्षात्मक अध्ययन

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कैटरेक्ट नेत्र रोग हेतु आयुर्वेद की भाषा में कफजलिंगनाश (चतुर्थपटलगत तिमिरावस्था) उपयुक्त शब्द है। लिङ्गनाश शब्द एक पारिभाषिक शब्द है जिसका अर्थ दृष्टि नाश होता है। प्राचीन काल से इस कैटरेक्ट रोग की चिकित्सा शल्य कर्म द्वारा की जा रही है, परन्तु सुश्रुतसंहिता में प्रदत राजर्षि निमि मत से यह शल्य चिकित्सा 'एक्सट्राकेप्सयूलर' प्रकार का था न की 'काऊचिंग' शल्यकर्म। इस शस्त्र कर्म में वेधनस्थान व आकार आजके लघुभेदन - 'स्माल इनसीजन' प्रकार का था। कफज लिंगनाश के शल्य कर्म में पूर्वकर्म, प्रधान कर्म, पश्चात् कर्म के होनेवाले उपद्रवों आदि, उन के प्रतिकार सहित वर्णन उपलब्ध है जो कि इस शल्य क्रिया के सभी पक्षों को वैज्ञानिक धरातल प्रदान करता है।