ADHIMANTHA (GLAUCOMA): A REVIEW BASED ON AYURVEDA

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ABSTRACT

Due to increased urbanisation and environmental pollution, medical science is progressing in terms of therapy and medicines for the management of diseases as well as for better health conditions. Shalakya Tantra is one among the important branch of Astang Ayurveda. It deals with the diseases above clavicle i.e Chaksu, Nasa, Karna, Mukh and Shirah. Adhimantha is an important eye disease mentioned in Sarvagata Netrarogas by Acharya Sushruta and Vaghbhat. Abhisyanda is the root cause of all eye diseases. Ayurvedic Classics mentioned Adhimantha which means Adhi (Excessive) and Manth (Churning); in which excessive pain, churning type of pain is present in the eyes. Glaucoma is the chronic progressive optic neuropathy characterized by loss of retinal ganglion cells which leads to progressive loss of visual field. The commonly found risk factor is rise in intraocular pressure. Glaucoma is the second major cause of blindness in the world and also effects millions of people in India. Adhimantha, can be correlated to Glaucoma (Primary Open Angle Glaucoma) in terms of etiopathogenesis, clinical features, complications and treatment modalities. The associated symptoms are headache (Shirahshula), pain in eyes (Netra Utpatyate), Foreign body sensation (Panshpurpan), Lacrimation (Strava), redness of eye (Rakt Raji) and reduced visual acuity. So, in present scenario, study on Adhimantha its concept and its line of treatment according to Ayurveda is essential. This article describes the ayurvedic concept of Adhimantha and its line of treatment.

KEYWORDS: Adhimantha, Primary Open Angle Glaucoma, Ayurvedic treatment.
INTRODUCTION

Shalakya Tantra is an important branch in Ayurveda. Acharya Sushruta has described 76 types of eye diseases and separate chapter for sarvagata ashiroga in uttartantra. Adhimantha is one among the sarvagata netrarogas, which is the result of improper treatment of Abhisyanda.\(^1\) Acharya Vagbhhat has described 94 Netrarogas and Adhimantha is mentioned in Sarvaakshiroga Vigyanium.\(^2\)

“Sarvendriyam nayanam pradhanam”

Eye is the most precious organ than any other sense organ as it provide good vision and it is responsible for social and intellectual development. Adhimantha is one among the important eye diseases. Adhimantha, presents symptoms similar to Glaucoma. The associated symptoms are Shirahshula (Headache), Netra Utpatyate (Pain in eyes), Panshupuran (Foreign body sensation), Strava (Lacration), Rakt Raji (redness of eye) and reduced visual acuity.\(^3\) The management of Adhimantha are similar to that of Abhisyanda.\(^4\) The treatment modalities are Raktamokshan, Virechan, Basti, Swedan, Tarpan, Putapaka, Doomapana, Ashchytana, Nasya, Seka, Shirobasti, Lepan, Anjana, Kaval. Agnikarma can be performed above the eyebrows if above treatment fails.

Glaucoma presents even greater public health challenge in comparison to cataract, as it causes irreversible blindness. Primary Open Angle Glaucoma (POAG) affects more than Angle Closure Glaucoma (ACG) in the ratio 3:1. In India 12 million people are being affected accounting for 12.8% of country’s total blindness.\(^5\) In spite of technological advancement in the field of ophthalmic medicine and surgery there are various challenging problems. The treatment modalities in modern are miotic, prostaglandin analogues, carbonic anhydrase, hyperosmotic agents are used in Glaucoma, but none of them are totally effective in curing the disease.

Nidana/Etiology

The cause of Adhimantha is similar to the general Netra Roga Nidan as it does not have specific Nidana. In sushruta Samhita and other books the following causes for eye disease is given.\(^6\)

<table>
<thead>
<tr>
<th>Causative factors</th>
<th>Su.Sh</th>
<th>M.N</th>
<th>B.P</th>
<th>Y.R</th>
<th>V.S</th>
</tr>
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<tbody>
<tr>
<td>Diving into water immediately after exposure to heat</td>
<td>+</td>
<td>+</td>
<td>+</td>
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<td>+</td>
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<tr>
<td>Excessive looking at distant objects</td>
<td>+</td>
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</tbody>
</table>
Sleeping during day/awakening at night + + + + +
Excessive weeping + + + + +
Anger/ grief + + + + +
Injury to head + + + + +
Excessive use of sour gruel and vinegar + - + - -
Kulatha and Masha pulses + - + - -
Suppression of natural urges + + + + +
Excessive perspiration + + + + +
Smoking or working in smoke + + + + +
Suppression of excessive vomiting + + + + +
Checking tears + + + + +
Concentrating on minute objects + + + + +
Intake of fluids and other foods at night - + - + +
Alcohol - + - + +
Change of seasons - + - + +
Travelling in very high Speed - - + - -
Abhishyanda + - - - -

1. Aharaja Nidana – Abhisyandi Guru Aharas leads to Kapha Prakopa and Samsamsa Meda Dhatu.

2. Viharaja Nidana - include Atapa Anala Sevana, Sookshima Nireekshan, Swapna Viparyaya, Alpa Nidrata. Excessive close work leads to convergence, strain in the eyes which may lead to degenerative changes in the eyes.


Other causes of netra vikaras

Dalhan has mentioned Avaka and Ucchrita shira Shayana (sleeping with head position at too low or too high), Ritu Viparyaya, Jvaropatapa are some causes of eye diseases.\[7\]

Netra Prakashika has mentioned excessive or deficient oil bath, heavy weight lifting, working with shaking hands, with craft (Abhichara), excessive looking at books, illuminating objects like sun, fire, gems, etc. are the causes of eye diseases.\[8\]

According to Yogaratnakara, excessive intake of alcoholic drinks, by physical contact, by inhalation or coming in contact with respired air, eating together, using same bed, garlands, cloths, cosmetics, leads to Kushta (skin disease), Jwara (fever), Shosha (wasting), Netra Abhisandya (conjunctivitis).
Purvaroop
The Purvaroop of Adhimantha is similar to the general Netra Rogas\textsuperscript{[9]} Avyakta Lakshan or sometimes Ashru Shrava, Avila Darshan, Guruta etc. can be seen in the Netra.

Types of adhimantha as per ayurveda\textsuperscript{[10]}
1. Vataja Adhimantha
2. Pittaja Adhimantha
3. Kaphaja Adhimantha
4. Raktaja Adhimantha

Samprapti
Due to Nidan Sevana, Doshas get vitiated moving upward and reaches to Siras i.e blood vessel and localised in the eyes and give rise to several eye diseases.

(continued on the next page)
Samprapti ghatak

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1.</td>
<td>Dosha</td>
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<td>2.</td>
<td>Dushya</td>
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<tr>
<td>3.</td>
<td>Agni</td>
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<td>4.</td>
<td>Ama</td>
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<td>5.</td>
<td>Srotas</td>
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<td>6.</td>
<td>Srotodushti Prakar</td>
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<td>7.</td>
<td>Udbhava Sihana</td>
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<td>8.</td>
<td>Sanchgara Sihana</td>
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<td>9.</td>
<td>Vyaktha Sthana</td>
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<tr>
<td>10.</td>
<td>Roga Marg</td>
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</tbody>
</table>

Roopa

Gada Nigraha, Madhav Nidana, Yoga Ratnakara and many other medieval authors have not mentioned features separately of these types.

1. **Vataja adhimantha:** Negligence of Vataja Abhisyanda leads to Vataja Adhimantha. Severe pain of various type like Netra Utpatyate (Extraction of eyes), Mathyate Arnivat (Churning), Sangrasha (Foreign body sensation), Toda (Pricking), Nirbhed (Tearing), Kuncana (feeling of constriction), Asphotana (Bursting), Adhman (Raised tension), Kampana and Shirsoardha vyathana (pain in half side of head)\(^{[11]}\) etc.

In addition to above Acharaya Vagbhata mentioned pain as Arnivat Mathyate (churning type of pain) in head, eyes, eyebrows and root of the nose along with Brahm (giddiness) and Karna Nada (various type of sound in the ear).\(^{[12]}\) Rasadhatu plays major role in the nutrition of intraocular structures.

2. **Pittaja adhimantha:** Negligence of Pittaja Abhisyanda leads to Pittaja Adhimantha. Pain is severe as Vahnivat dahate (caustic alkali or burning coal) is applied to the eyes. Prapakvo shuvartmaant (Eyelids along with its margins are supprated and swollen), Rakraji (Red streaks), Srava (lacrimation), Sweda (perspiration), Murcha (fainting) and Shirodaha (burning sensation in the head), Peetdarshan (preserving all the objects yellow in colour).\(^{[13]}\)

Here predominant Dosha is Pitta. Pitta is the main functioning factor of the eyes, if it is vitiated and confined to Sira Srotas, it leads to visual disturbances.

3. **Kaphaja adhimantha:** Negligence of Kaphaja Abhisyanda leads to Kaphaja Adhimantha. The symptoms are shophavan Na Ati Samrabdhham (there is swelling but not excessively
congested), *Shirodakh* (headache), *Shophah* (mild edema), *Sravha* (lacrimation), *Kandu* (itching or grittiness), *Shaitya* (coldness), *Paichilya* (sliminess), *Dushika* (muddy discharge), *Harsana* (horripilation), *Gaurav* (heaviness), difficulty in visualising objects due to *Avilata* i.e corneal haziness, *Nasadhmana* (feeling of fullness or blockage of nose).\[14\]

Acharya Vaghbhat mentioned *Shwetamandal unnat* (chemosis), *Nata* (convex) type of change in *Krishna Mandala*, *Praseka* (Excessive salivation), *Nasika Adhmana* (blocked nostrils), *Pansupuranam iva eksanam* (vision become blurred as if eyes are filled with dust) are the clinical features of *Kaphaja Adhimantha*.\[15\]

*Pitta* is functioning in the fluid media of *Kapha*. *Vata* also has conduction in this medium. Vitiation of *Kapha* leads to destruction of *Vata* and *Pitta Doshas* in the medium. So, visual impairment can be seen. Decrease visual acuity, field defects etc. may finally leads to total blindness.

4. **Raktaja adhimantha**: Negligence of *Raktaja Abhisandya* leads to *Raktaja Adhimantha*. Various type of severe pain *Toda* (pricking type), *Bandhu Jiva Pratikasam* (eyes looks red like Bandhu Jiva flower), *RaktSrava* (bleeding), *Sparshnakshaam* (tenderness due to increase in IOP), coppery discoloration resembling a *Japapushpa*. *Krishna* portion appears like *Arishta* fruit dipped in blood, *Dipta* (burning sensation), *Pashtiagninibhadish* (preserving all the objects in red colour) are the clinical features of *Raktaja Adhimantha*.\[16\]

In this stage, ciliary and iris congestion are prominent. Ciliary and equatorial staphyloma can be formed. In this condition there is degeneration and thinning of *Shuklamandala*.

**Chikitsa (Management) of adhimantha**

**Samanya chikitsa**\[17\]: Samanya Chikitsa sutra for *Netra Roga /Adhimantha* are as follows

1. **Eye rest**- Excessive writing, reading observing minute objects for long duration of time in dim illumination causes eye strain and it should be avoided.

2. **Nidana Parivarjana** - looking at minute object, day sleep, exposure to dust smoke, causative factors of *Dosha Prakopa*, not following *Rutucharya* i.e seasonal regime etc. should be avoided.
3. Management of **Purvaroopa** - **Acharya Sushruta** mentioned immediate action of **Purvaroopa** of the disease as it is observed. The condition is likely to turn serious depending on pathology of the disease. So, treatment should be done.

Note: **Tikshana Shiroyirechana, Kwalaagarah, Dhoompana** and **Upavasa** leads to **Vata** vitiation. So, it should be avoided in **Vataja Adhimantha**.

- **Lepa** – If **Adhimantha** presenting symptoms like redness, lacrimation burning sensation, oedema, lepa or bidalaka can be applied. The ingredients are **Chandan, Maricha, Patra, Ela, Suvarnagairika, Tagar, Rasanjana, Saindhava and Yashtimadhu**. In initial stages of disease **Anjana** is contraindicated and **Lepa** is advised.

- **Avagunthana**- **Shigru Beeja**- 1part, **Manovaha**- 4part, **Lodhra** powder- 16 part should be bagged in cotton cloth and **Avagunthana** should be performed.

- **Sechana**- 40 gm of **Daruharidara** is added in 640 ml of water and **Kwath** is prepared and boil it till 1/8th portion remains. **Sechana** is performed after mixing honey in it. It is beneficial in all eye diseases.

**Specific chikitsa**

1. **Vataja adhimantha**

**Acharaya Sushruta** mentioned, management of **Vataja Adhimantha** is done similar to the management of **Vataja Abhisandya**. It includes

- **Siramokshana**
- **Virechan followed by Snehapan**
- **Sneha Basti**
- **Vata Dosha Shamak Anjana**
- **Tarpana**
- **Putapaka**
- **Seka**
- **Snigdha Ashchютана**
- **Snigdha Dhoompana**
- **Snehan Nasya**
- **Shirobasti** etc.

- If above treatment does not relieve the symptoms then **Agnikarma** is performed on lateral side of eyebrows.[18]
2. *Pittaja adhimantha*
   - *Raktamokshana*, either *Sirimokshana* or *Jalaukaavacharana* can be performed primarily.
   - *Virechana* is beneficial for *Kayashodhana* and strict dietary plans are essential.
     Other treatment modalities are
   - *Kshirsarpi Nasya*
   - *Seka*
   - *Lepa*
   - *Nasya*
   - *Anjana*
   - *Ashchyotana*
   - Treatment mentioned in *Visarpa* can be done.\(^{[19]}\)

3. *Kaphaja adhimantha*

   *Kapha Shodana* is the basic principle of management of the disease and it is as follows\(^{[20]}\).
   - *Apatarpana* including general *Kaphashoodana* of the body.
   - For head region, *Kapha Shodana* can be done by *Nasya, Kavala Gandoosha* etc.
   - Through *Raktamokshana*, *Srotoshudhi* can be done
   - Localised *Kaphashoodana* for eyes can be done by *Anjana, Bidalaka* with *Kaphashaman*
     drugs are also beneficial.

4. *Raktaja adhimantha*

   In *Raktaja Adhimantha*,
   - *Abhyanta Shodhana with Kaumbh Ghrita Pan*
   - *Siratmokshana*
   - *Virechan*
     Localised treatment modalities are
   - *Nasya*
   - *Dhoompana*
   - *Ashchyotana*
   - *Tarpana*
   - *Snigdha Putapaka*
   - Treatment can be done similar to *Raktaja Abhisandya*
   - Treatment can be done similar to *Pittaja Adhimantha*.\(^{[21]}\)
Sadhya- asadhyata

Ancient Acharya mentioned four types of Adhimantha and its management i.e if treated in time are manageable (Sadhya Roga). If it is ignored or patient does not follow diet and seasonal regime, visual loss occurs as follows:

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Types</th>
<th>According to Acharya Sushruta</th>
<th>According to Acharya Vaghbhata</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Vataja Adhimantha</td>
<td>Loss of vision within 6 days</td>
<td>Loss of vision within 5 days</td>
</tr>
<tr>
<td>2.</td>
<td>Pittaja Adhimantha</td>
<td>Loss of vision instantly</td>
<td>Loss of vision instantly</td>
</tr>
<tr>
<td>3.</td>
<td>Kaphaja Adhimantha</td>
<td>Loss of vision within 7 days</td>
<td>Loss of vision within 7 days</td>
</tr>
<tr>
<td>4.</td>
<td>Raktaja Adhimantha</td>
<td>Loss of vision within 5 days</td>
<td>Loss of vision within 3 days</td>
</tr>
</tbody>
</table>

Pathya and Apathya

Pathya\(^\text{[22]}\)

- Kriyakalpa - Ashchyotana, Langhana, Anjana, Swedana, Virechan, Nasya, Tarpana, Pratisarana, Raktamokshana.
- Shaka Varga - Patol, Shigru, Vastuka
- Phala Varga - Draksha, Amla, Dadima
- Aushadhi Varga - Punarnava, Bringaraja, Triphala and Chakshushya drugs.
- Taila Varga – Tila Taila
- Ksheera Varga – Purana Ghrita, Ksheera
- Madhya Varga – Kanchika
- Shooka Dhanya Varga – Sali, Shashtika
- Mamsa Varga – Dhanva Mamsa

Apathya\(^\text{[23]}\)

- Vegadharana – Krodha, Shoka, Ashru, Mootra, Pureesha, Nidra etc.
- Ahara – Amla, Katu, Teekshna, Ushna, Guru, Annapana
- Vihara – Divaswapna, Ratrijagarana, excess talking etc.

REFERENCE


