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यन्कल्प्ये हारकोसमकल्पयन् ॥१॥ विश्वकर्मोणमाहूयपुरीहाडकनि
 र्मेता ॥ तत्रयोडशसाहस्रस्त्रीरुग्णैश्चैववराधिकम् ॥११॥ भवनानि मनोज्ञानि
 योमध्यकल्पयन् ॥ परिजातनरं चैवतासंभोगायकल्पयन् ॥१२॥ या
 यानां गृहास्तनयद्रूपेणाशतकोटयः ॥ अल्पिबहुवोलाकावसंनिवितात्
 राः ॥१३॥ यन्त्रिविधेषु लोकेषु सुंदरं नवदृश्यते ॥ सवाजिनप्रज्ञेनाप्यो पु
 त्रयुगस्य विक्रान्ते ॥१४॥ अर्धोपनीरमासाद्यतन्मनस्कतया वसः ॥ सनाडि
 स्तपस्तेपस्वर्यं बुद्धिश्च बुद्धिमात्रं ॥१५॥ अतनिरसने मत्स्यस्यैव वदन्ते च
 तेः प्रसन्नो भगवान् यत्राजितपुरं स्थितं ॥१६॥ सत्रात्रितोषितुष्टावष्टादि वैदि
 तकरश्रुति नोराशानमस्तिरुक्त्तु नमस्ते सर्वतो मुखः ॥१७॥ विश्वव्यापिनमस्तेरु
 मस्तिनिष्करोपणं ॥ कल्पयेयममस्तेरुक्त्तु हरिदश्वनमोक्त्तुते ॥१८॥ गृहराजन्म
 त्स्तेनमस्ते वैदुराचिव्यो ॥ वेदत्रयन्मस्तेरुक्त्तु सर्वदेवमोक्त्तुते ॥१९॥ पृथीद
 िद्वेवा सुदृष्टो मादिवाकरः ॥ अथैकैक्यमानो सादवदेवादिवाकरः ॥२०॥
 तिस्रसो भीरसपर्यसक जिनमवावरे ॥ नरं वदितुं सन्निहितं यन्मनसि



A Critical Review on Glaucoma and its comprehensive management in Ayurveda.

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Abstract: Glaucoma is a neurodegenerative disease of the optic nerve that primarily affects adults in their forties and fifties. It is caused by a combination of eye disorders that lead to optic nerve damage and loss of visual function. Glaucoma is the second-leading cause of irreversible blindness in the world, and the third-leading cause in India. In Ayurveda, this disease is associated with Adhimantha. According to Acharya Sushruta and Vagbhatta, Adhimantha is a Sarvagata netraroga. In terms of etiopathogenesis, clinical features, implications, and treatment approaches, it is identical to Glaucoma. The Doshas are Prana-Vyana Vayu and Alochaka Pitta, while the Dushyas involved in pathophysiology are Rasa-Raktha-Mamsa. This causes Optic Nerve Head changes and field abnormalities, which can ultimately to blindness. Ayurvedic eye care reduces eye aging, rejuvenates the eyes, and improves vision. Topically applied medications have higher bioavailability than orally taken medications. Ayurvedic medications and therapies maintain the body in balance, prevent sickness, and prevent blindness.

Key-words: Adhimanta, Glaucoma, Ayurveda, Shalakya, Eye disease, Blindness.

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Introduction

Glaucoma and Adhimantha in Ayurveda are quite similar in terms of indicators and symptoms. Adhimantha is a potentially blinding illness characterized by strong, terrible pain in the eye as if the eyeball were being ripped out of the orbit, headache, rapid progressive vision loss, and excessive redness. Glaucoma is a group of disorders characterized by the progressive loss of retinal ganglion cells and their neurons, which results in characteristic optic nerve head cupping and visual field loss.^[1] Glaucoma affects over 60 million individuals worldwide, according to estimates. Glaucoma is seen in 2.65% of persons over the age of 40. Primary open-angle glaucoma (POAG) is more frequent than primary angle closure glaucoma (PACG), accounting for around one-third of all cases globally. Glaucoma is the second largest cause of blindness in India. Glaucoma affects 12 million people in India, accounting for 12.8 percent of total blindness. Glaucoma affects around 11.2 million persons aged 40 and over. Glaucoma is a greater public health risk than cataract because the blindness it causes is irreversible. While modern human efforts have succeeded in increasing life expectancy, the danger of neurological disease has grown dramatically as a result of high-tech advances.

While addressing 76 different sorts of eye illnesses, Acharya Sushruta included a special chapter in Uttartantra for Sarvagat akshiroga, which includes Adhimantha. Adhimantha is one of the Netra rogas described in the classics, and it arises as a result of bad treatment of

Abhishyanda.^[3] All of the Abhishyanda therapy modalities, as well as Raktamokshana, Basti, Virechana, Swedana, Tarpana, Putapaka, Doomapana, Aschyotana, Nasya, Seka, Shirobasti, Lepana, and Anjana, can be used in Adhimantha chikitsa.

Etymology:

The word Adhimantha is composed of words "Adhi + Manth" which means severe churning or twisting pain eyes. All Abhisyaanda will proceed to Adhimantha if they are not managed properly and are abused. Tivra Vedana (acute anguish) is a common characteristic in all Adhimanthas. Because numerous Doshas are involved, there will be Dosha-specific discomforts in addition to pain. The patient feels as if his eye is being yanked from its socket and whirling along half of his skull, causing excruciating discomfort. Adhimantha can cause blindness in addition to irritation (Acharya Adhamalla in Dipika). As a result, Abhisyaanda and Adhimantha differ in terms of pain and vision loss. One of the disease's distinguishing features is the loss of vision (Vyadhi Swabhava). Adhimantha's discomfort will spread to the temporal, dental, and occipital regions. Adhimantha is similar to any painful vision loss, such as Primary Open Angle Glaucoma (moderate discomfort or weight in the eyes), Acute Congestive Glaucoma, etc.

Vataja adhimantha (Acute Congestive Glaucoma)

If Vataja abhishyanda is ignored, Vataja Adhimantha is produced. Severe pain of various nature like extraction, churning, foreign body sensation, pricking, tearing, splitting, bursting, Kampana and half headache etc.

Vagabhata added in this the pain like Karna nada, churning type of pain in head eye and root of the nose and with giddiness.[4]

Pittaja Adhimantha (Acute Congestive Glaucoma)

It is Sarvagatha sadhya vyadhi. Pain or sensations as if caustic alkali or burning coal is applied to eye, eyelids suppurated and its margins excessively swollen, red streaks (Rakta raajeechitam) are seen i.e., severe congestion and eye appears like a piece of liver, lacrimation, perspiration, fainting, burning sensation in eye and head, etc. [5]

Kaphaja Adhimantha (Simple Chronic Glaucoma or Chronic Congestive Glaucom)

In Kaphaja Adhimantha the symptoms like grittiness i.e., foreign body sensation, headache, mild edema i.e., inflamated but not excessively congested, cool feeling, lacrimation and slimy discharge, itching, heaviness, horripilation, difficulty in visualising object due to Avilata i.e.; cornel haziness, Nasadhmana, depressed black portion and elevated white portion i.e. chemosis, Praseka i.e. excessive salivation are the chief manifestation.

Raktaja Adhimantha (Congestive Glaucoma or Secondary Glaucoma)

Raktaja Adhimantha is generated if Raktaja abhishyanda is left untreated. Severe pain of various nature like pricking type, eye become red and discharges red secretion, tenderness due to increase IOP, coppery discolouration, burning sensation in the eye and head, etc.

Nidana

The general Nidana of Netra roga are considered as the cause of Adhimantha.

- Aharaja nidana - Abhishyandi and guru aharas leads to Kapha prakopa and Meda dhatu.
- Viharaj nidana - Sookshma nireekshan, Swapna viparyaya, Alpa nidrata, excessive close work results in excessive convergence, strain in the eyes, which may bring the degenerative changes in the eye including trabecular meshwork, resulting in Glaucoma.[6]
- Manasika bhavas - Bhaya, Klesha Shoka, Kopa and Irshya. Swapna Viparyaya leads to Agni mandya and Kapha prakopa.

Rupa (Clinical features)

- Haziness of vision
- See halos around lights
- Rapid onset of severe eye pain
- Headache
- Nausea
- Vomiting

Signs

Primary Open Angle Glaucoma / Chronic Angle Closure Glaucoma

- Elevated IOP (>21mm Hg)
 - Optic disc cupping
 - Visual field defects
- #### Acute Angle Closure Glaucoma
- Red eyes, pupil may be large and non-reactive to light
 - Decreased visual acuity
 - Corneal swelling
 - Highly elevated IOP

Samprapti ghatakas

- Dosh - Prana-Vyana, Alochaka Pitta and Tarpaka Kapha
- Dushya - Rasa-Rakta-Mamsa-Medho dhatu
- Agni - Jataragni

- Ama - Jataragni and Dhatwagni mandyajanya
- Srotas - Rasavaha-Raktavaha-Mamsavaha-Medovaha Srothus
- Roga marg - Madhyama Roga marga

Samprapti :

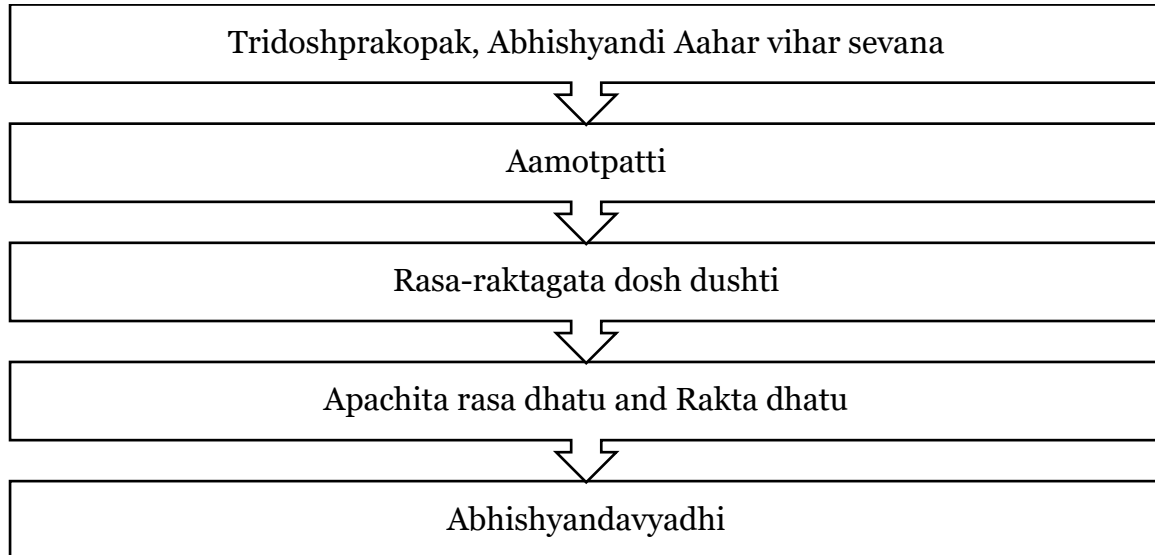


Figure 1 – Samprapti of Adhimanta

Prevention:

Anjana karma- Eyes mainly having Teja property, they can easily get affected by Kapha dosha. Rasanjana should be done once in week.^[7] Anjana scrapes and expel dosha from netra, vartma, sira, netra kosha and ashruvaha srotas through mouth, nose and eye.^[8]

Chakshushya Medicines - Triphala, Shigru, Shatavari, Triphala ghrita^[9]

Aahara - Ghee, Honey, Mudga, Raisins, Pomegranate

Eye exercises- Palming, distant and near focusing, rotational movements of eye will help to improve blood circulations to eyes. These exercises will strengthen the muscles of eyes and maintain vision level.

Yoga- Bhramari, Soorya Namaskara useful to improve strength of eye.

Kriyakalpas - Kriyakalpas are specific procedures for eyes. They lubricate and

rejuvenate the eyes. Impurities are expelled out. It helps to bring back brightness and clarity to the eyes.^[10]

Tarpana - Tarpana is very effective Kriyakalpa. It is used to treat early formation of glaucoma

Nasya karma – Vaisheshika nasya is useful to improve eye sight. It is indicated in visual disturbances like Timir.^[11]

Management

At early stage- Tikshn shirovirechan, Tikshn kawaldharan, Dhupan and Lepa.

In Samawastha- Seka, Bashpsweda, Lepa, Madhur, Tikta intake. Avoid Anjana, Ghritpan, puran, Kashaypan, heavy food intake as it can result into Ama formation.

In Niramawastha- Snehana, Swedana then Sirawedh at forehead. Then Vaman, Virechan, Basti, Shirobasti, Nasya, etc.^[12]

After this Shodhan chikista, internal dosh Shamak chikista will helpful.

Locally- Kriyakalpa, Pindika, Agnikarma, Raktamokshana.

According to Chakradutta [13-19]

- Vataja adhimanth with unctuous and hot drugs (Singdha/Usna)
- Pittaja with soft and cold (Mrdu/Sitala)
- Kaphaja with irritant, rough, hot and non slimy drugs (Tiksna, Ruksa, Ushna, Vishada)
- Raktaja adhimanth treated as Pittaja adhimanth and rakta shamak chikitsa.
- In the Purva rupa stage of Abhisyananda and Adhimantha, tiksna gandusha and Nasya are advised.

Chikitsa for Vataja Adhimantha [18-22]

Snehana, Sweda, Sira Mokshana, Virecana, Vasti, Seka, Aschyotna, Anjana, Tarpan, Putapak, Nasya, Shirovasti etc are available.

Snehana:

- Intake of ghee after meal.
- Intake of medicated milk and ghee prepared with Triphala.
- Intake of medicated milk and ghee prepared with Dashmool.

After the above medication Mrudu Sweda is advised. Mrudu Sweda: (Seka) with any of the following.

- Haridra Rasanjan + milk + Saindhava lavana.
- Salvana Sweda.
- Sukoshna dugda + Saindhava lavana.
- Amla dravya like Kanji.

Aschyotna yogas (eye drops)

- With the decoction of Bilwadi panchamool, Bruhati, Eranda and Sigrū.

- With the decoction of Nimba patra and Lodhra.
- Netra Bindu Used for eye drops (Gulab jal 1-2 bottles, Karpooora 6 masha, Ahiphena 2 tola, Rasanjana 8 tola).

Chikitsa for Pittaja Adhimantha

Langhana (for aama pachanam), Sneha pana, Rakta Mokshana, Virechana

Seka yogas

- Chandan, Nimba patra, Yastimadhu, Rasanjan, Saindhava lavan, grinded with water and should use as seka with honey.

Aschyotna yogas

- Nimba patra kalka has to paste to the Lodhra and heated; The powder + Stanya, after filtration should use for Aschyotna.
- Medicated milk prepared from Draksa, Yastimadhu, Manjistha, Jeevaneeya dravya.

Chikitsa for Kaphaja Adhimantha:

- Sweda, Avapeedan, Nasya, Anjan, Dhoompan seka pralepa, Kavalagrah, Rukshna, Aschyotna, Ruksha Putapaka, Apatarpan, Aahara and Vihara.
- Langhana, Swedana Nasya, Tikta bhojan, Ruksha and Teekshna Virechana.
- Anjana - Saindhava lavana, Triphala, Trikatu, Shankha nabhi, Samudra phena, Shyleyaka Sarjarasa, should be grinded with water and varthi is prepared for Anjan.

Chikitsa for Raktaja Adhimantha

[18-23]

- Antah Sodhana - Snehana with Kaumba ghrita (100 years old ghrita), Mamsa rasa bhojana

- Sthanik Upachara - Tarpan with medicated ghrita, Nasyam with medicated oil
- Seka - Triphala, Lodhra, Yastimadhu, Sugar, Musta should be grinded with cool water and used for seka.
- Pralepa - Neelothphala, Usheera, Daruharidra, Kaleeyaka (Agaru) Yastimadhu, Musta, Lodhra should be grinded with shathadautha ghrita to paste around the eyes.

Discussion:

Glaucoma is called as "The Sneak Thief of Sight" since it has no symptoms and causes irreversible visual loss. Without realizing it, it is possible to lose up to 40% of one's eyesight. Glaucoma is a group of diseases characterized by a progressive optic neuropathy that steals sight gradually and without warning. Although there is no known cure for glaucoma, it may usually be treated before it progresses to the point of blindness. The ancient Indian system of natural and holistic medicine attempts to keep people healthy and live longer lives. It nourishes the eyes and helps with sickness treatment. Glaucoma is a group of diseases that cause progressive eyesight loss. Everyone is at risk for glaucoma, but some of the greater risk factors include being 40 or older, having a genetic history, having systemic illnesses such as diabetes and high blood pressure, having a thin cornea, and so on. According to Ayurveda, ignoring Abhishyanda leads to Adhimantha. Adhimantha is a Sadhya, or curable ailment, according to Ayurveda. As a result, the therapy methods described

for Adhimantha can be used to treat Glaucoma and assist recover declining eyesight. Following the Dinacharya and Ritucharya concepts as described in Ayurvedic writings may also help to avoid illness development.

Conclusion:

Glaucoma is a neglected illness that is the second leading cause of blindness after cataract. Glaucoma is thus a worldwide public health issue. Agnimandya, malasamchya, pranavaha, and rasavaha srotodushti seem to be important in glaucoma damage. Adhimantha's main presenting characteristic is eye pain, which is also a pathognomic trait. Ayurveda believes that prevention is preferable to treatment. Ayurvedic principles are useful in management. Ayurvedic eye care prevents eye aging, rejuvenates the eyes, and enhances eye function.

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