



‘REVIEW STUDY ON KAPHAJ ADHIMANTH W.S.R TO PRIMARY OPEN ANGLE GLACOMA ‘

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ABSTRACT-

In *Ayurveda*, it is difficult to compare the POAG with a particular disease, but on the basis of many characteristic similarities Glaucoma can be correlated with the *Adhimantha*. According to *Ayurveda*, there is a *Sukshma Sroto Dushti (Sanga or Margavarodha)* at the level of aqueous humour outflow and in the optic nerve level. There is the involvement of *Doshas- Prana Vayu, Vyana Vayu, Alochaka Pitta* and *Tarpaka Kapha* and involved *Dhatu*s are - *Rasa, Rakta, Mamsa* mainly. Eye is one among the important sense organ by which we can see the beauty of the world. Our sight is so precious and we depend upon it so much that we cannot imagine what life would be like if we could no longer see. Glaucoma continues to be a major public health problem. Glaucoma being the second leading cause of irreversible blindness worldwide and third leading cause in India. It is famously termed as “sneak thief of sight” & “Silent killer of vision” because of its asymptomatic progression.

KEYWORDS- *Ayurveda, Shalakyatantra, Kaphaja Adhimantha, Poag, Nidan, Chikista, Pathya, Apathya*

INTRODUCTION-

The unique objectives of *Ayurveda* are achievement of optimum health which includes maintenance as well as promotion of the health in a healthy and cure of illness in a diseased. This is the earliest medical science having a possible concept of health to be achieved through a

blending of physical, mental, social, moral and spiritual well-being. As it became difficult to grasp it as a whole owing to its vastness, it was divided into 8 specialties of which *Shalakyatantra* is that which deals with diseases of supraclavicular area.¹ Globally Primary Open Angle Glaucoma (POAG) affects more than Angle Closure Glaucoma (ACG) with a ratio of 3:1². Glaucoma is estimated to affect 60.5 million persons worldwide by the year 2010^{3,4}. Glaucoma is not a single disease process but a group of disorders characterized by a progressive optic neuropathy resulting in a characteristic appearance of the optic disc and a specific pattern of irreversible visual field defects that are associated frequently but not invariably with raised intraocular pressure.^{5,6}

In the Pathophysiology, the major form of Glaucoma exists: POAG in which aqueous humour has free access to the trabecular meshwork, and PACG, in which access of aqueous humour to the trabecular meshwork is obstructed. Both forms of Glaucoma demonstrate of progressive optic neuropathy with visual field loss and characteristic structural changes.

Types of *Adhimantha*:⁷

Gada Nigraha, Madhava Nidana, Yoga Ratnakara and some other medieval authors have not described the features of these types separately. According to *Acharya Sushruta & Vagbhatta Adhimantha* can be classified into 4 types according to the predominance of *Doshas* as *Vatika, Paittika, Kaphaja* and *Raktaja*. The characteristic features of each variety are described below.

Vataja Adhimantha which is characterized by, severe churning, cutting and piercing pain and the eyes becomes cloudy, and feels as if being torn out and churned as with *Arani*. There will be localized edema, foreign body sensation, blurring of vision, *Adhmana* (raised tension), and different types of pain over half of the head. In addition, *Vagbhatacharya* has mentioned ringing in the ears and giddiness along with these ocular symptoms.

Vataja Adhimantha can be compared with acute congestive Glaucoma, iridocyclitis and acute orbital cellulitis. Here, the symptomatology includes both visual disturbances and systemic features.

In *Pittaja Adhimantha*, the eye is full of red streaks, discharges, with increased suppuration of lids and swollen lid margins. The patient perceives objects as yellow along with perspiration, fainting fits and a burning sensation in the head. The eyes in this case become liver-coloured and feel as if ulcerated or rubbed with an alkali. *Pittaja Adhimantha* can be compared with congestive stage of glaucoma, secondary glaucoma, iridocyclitis, and orbital cellulitis. The visual disturbances like defective colour perception are of clinical significance, indicating changes in retina and optic nerve.

In *Raktaja Adhimantha*, there will be pricking pain, tenderness and a bloodstreaked secretion from the affected eye which looks deep red like a *Bandhujiva* flower. Dark or blackish appearance of objects or reduced vision and the eye become red and the whole of the cornea look like an *Arishta* fruit submerged in blood. *Raktaja Adhimantha* can be compared with iridocyclitis or secondary glaucoma based on clinical features.

In *Kaphaja Adhimantha*, there will be swelling but not excessively congested, discharge, itching, Coldness, Heaviness, Difficulty in vision, less pain, distension of nose and the eyes feel as though filled with sand (blurring of vision). According to *Acharya Vagbhatta*, there will be *Unnata* (concave) type of swelling in *Shukla Manadala* and *Nata* (convex) type of change in *Krishna Mandala* as a result of *Kaphaja Adhimantha*. *Praseka* (excessive salivation), *Nasadhmana* and *Pamsupurnam-iva-eksanam*-sight becomes blurred as if eye is filled with dust. *Kaphaja Adhimantha* can be compared with POAG (chronic glaucoma) on the basis of such characteristics similarities.

POAG as *Kaphaja Adhimantha*⁸

On the basis of many characteristic similarities such as- not excessively congestion, Heaviness, Difficulty in vision, blurring of vision, mild headache & also basis on Patho-physiology, early stage of POAG can be correlated with the *Kaphaja Adhimantha* because at later stage *Tridosha* involvement occur, especially *Vata Prakopa* can leads to optic atrophy. If we analyse the Patho-physiology of Glaucoma there are mainly 4 pathological events. They are –

- Increased Resistance to Aqueous Humour outflow at Trabecular Meshwork (*Margavarodha/Sroto Sanga*).
- Hypoperfusion to ONH (*Sroto Sanga/Vimarga Gamana*).
- Failure of Auto Immunity & Apoptosis (*Vyadhi Kshamatva Hani/Bala Hani*).
- ONH Modification (*Dhatu Kshaya*) –structural & functional damage of RGC, resulting in loss of Normal Retinal Sensitivity to the light stimulus in early condition and later characteristic of Visual Field (VF) Defects (Scotoma) or permanent total blindness in advanced cases.
- The disease may be *Beeja Doshajanya* (Congenital/Hereditary).

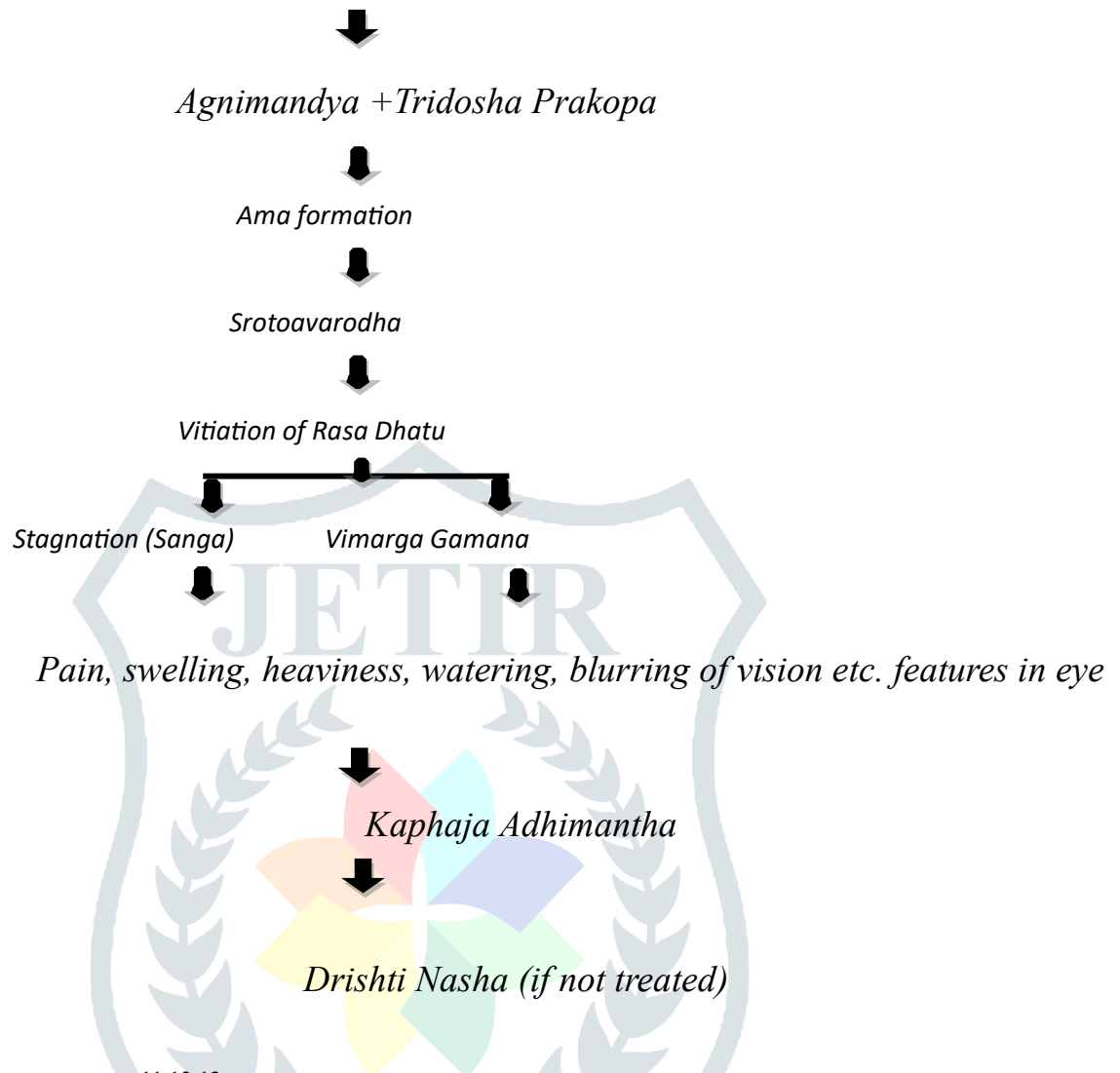
- Nidana⁹

Nidana of *Adhimantha* has not been explained separately, general *Nidana* of *Netra Rogas* can be considered for *Adhimantha* also. In *Sushruta Samhita* and other books, the following causes for eye diseases are given:

Causative Factors	
1. Diving into water immediately after exposure to heat	10.Excessive perspiration
2. Excessive looking at distant objects	11.Smoking or working in smoke
3. Sleeping during day/awakening at night	12.Suppression of/or excessive vomiting
4. Excessive weeping	13.Checking tears
5. Anger/grief	14.Concentrating on minute objects
6. Injury to head	15.Intake of fluids and other foods at night
7. Excessive use of sour gruel and vinegar	16.Alcohol
8. <i>Kulatha</i> and <i>Masha</i> pulses	17.Change of seasons
9. Suppression of natural urges	18.Travelling in very high speed
	19.Abhishyanda

Samprapti :- ¹⁰

Achakshushya Nidana Sevana (Mithya Ahara and Mithya Vihara)



Sadhyasadyata [Prognosis] ^{11,12,13}

Adhimantha is a *Sadhya Roga*, but if not cared and treated properly, the disease may progress and lead to loss of vision.

Blindness with the duration if not treated in time

<i>Adhimantha</i>	<i>Sushruta</i>	<i>Vagbhatta</i>
<i>Vatika</i>	6 days	5 days
<i>Paittika</i>	Sudden	Sudden
<i>Kaphaja</i>	7 days	7 days
<i>Raktaja</i>	5 days	3 days

General Principles of *Ayurvedic* Management of Primary Open Angle Glaucoma as *Kaphaja Adhimantha*:¹⁴

The early stage of disease can be considered to be *Kapha* predominant which is usually asymptomatic until it has caused a highly significant loss of visual field. The degenerative stage starting from the loss of nerve fibre layer and optic disc changes can be attributed to *Vata Prakopa*. Usually, the disease is diagnosed during this stage; hence, the disease is considered as a *Kaphaja Sarvakshi Roga* with *Vatika* involvement. Thus *Kapha Shodhana* therapy along with *Vatanulomana* will prevent further deterioration of the disease. Hence removing the *Margavorodha* (In Trabecular Meshwork & Optic Nerve Head) and treating the *Dhatu Kshaya* (In Trabecular Meshwork & Optic Nerve Head) and enhancing the *Vyadhi Kshamatva* (Neuro Enhancement/Neuro Protection) in the neuronal tissue by correcting *Agni*, doing *Vatanulomana*, performing *Brimhana /Shamana Nasya, Tarpana* and administering *Chakshushya Rasayana drugs* internally was the main principle of treatment.

Samanya Chikitsa :-¹⁵

- *Aptarpana, Sira Mokshana, Avpida Nasya, Anjana, Dhumapana, Pariseka, Pralepa, Ruksha Ashchyotana-Putapaka*, diet not increasing *Kapha* etc.
- In *Kaphaja Adhimantha*, three days of fasting or light food with *Tiksna Dhumpana, Kavala, Nasya* and *Vidalaka* is advocated by *Acharya Vagbhata*.
- *Avapeeda Nasya, Dhumapana, parisheka, Aschyotana, Tarpana & Putpaka* etc. with *Ruksha Kaphahara* drugs.

*Pathya and Apathya Pathya*¹⁶

- *Kriyakalpa: Ashchyotana, Langhana, Anjana, Swedana, Virechana, Nasya, Tarpana, Pratisarana, Raktamokshana.*
- *Shaka Varga: Patola, Shigru, Vastuka.*
- *Phala Varga: Draksha, Amla, Dadima*
- *Aushadhi Varga: Punarnava, Bhringaraja, Triphala & chakshushya drugs*
- *Taila Varga: Tila Taila*

- *Ksheera Varga: Purana Ghrita, Ksheera*
- *Madhya Varga: Kanchika*
- *Shooka Dhanya Varga: Sali, Shashtika*
- *Mamsa Varga: Dhanva Mamsa*

Apathya

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

DISCUSSION-

POAG is not a single disease process, but a group of disorders resulting in the damage of optic nerve head and irreversible visual field defects. This definition itself is enough to generalize the disease to the three tunics of the eye. To understand the basic progressive nature of the disease, it becomes necessary to view the clinical stages in terms of *Tridoshas*. The changes in the fluid dynamics results in increased IOP which progresses to degenerative changes in the nerve fiber layer gradually leading to progressive vision and field loss. The disease pathology is primarily concerned around the limbus (sclera-corneal junction) and aqueous humour outflow pathway. These regions are having the predominance of *Prithvi* and *Jala Mahabhootas* and hence *Kapha* is the predominant *Dosha* here. This *Kapha* maintains the structural integrity of the eye and provides nourishment to the *Indriyas*. As aqueous is nutritive in function, the predominant *Dhatu* is *Rasa Dhatu*. Modern science also considers the importance of Intra ocular pressure created by the aqueous humour in maintaining the structural compactness of the eye. *Vata* which is responsible for *Indriyapravartana* (stimulation, activation) functions properly in the medium of this fluid. Among the *Pancha Vayus*, *Prana*, *Udana* and *Vyana* play a great role in the *Paripalana* of *Netra*, both anatomically and physiologically. These *Tridosha* in *Sama* condition maintain the proper functioning of normal vision. Any defects in the qualities or properties of *Kapha* resulting in the loss of structural integrity, deranges the normal movement and functioning of *Vata* leading to a series of degenerative changes. This *Prakopa* of *Vayu* leads to *Indriyas Upatapa* that can be presented with a minor ailment to the *Netra* or may end up with *Indriya Upaghata*. Vision loss ultimately results in the functional loss of *Pitta*.

CONCLUSION-

POAG is described distinctly as a multifactorial optic neuropathy that is chronic and progressive and usually asymptomatic ultimately leading to vision loss. So as the disease POAG affects almost all parts of the eye, it can be included under *Sarvakshigata Roga*. In *Shalakyatantra*, the term *Sarvakshi* is used to refer the whole part of the eye including the *Mandalas, Sandhis and Patalas*. The progressive diseases leading to complications and finally vision loss if left untreated are grouped under *Adhimantha*.

So, according to *Ayurveda*, glaucoma is best correlated with a condition known as *Adhimantha* and is of four basic type's i.e. *Vataja, Pittaja, Kaphaja & Raktaja* on the basis of many characteristic similarities, which is described under *Sarvagata Roga* by *Acharya Sushruta*. So a brief review of this disease is made here for proper understanding the disease. Acute pain is common feature in all *Adhimantha*. According to *Acharya Sushruta* the disease *Adhimantha* has been defined as an intense feeling in eye as if it is being extracted out & being churned up along with half of the head with specific features of the particular *Doshas* involved.

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