ROLE OF AYURVEDA IN THE MANAGEMENT OF GLAUCOMA-A REVIEW ARTICLE

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ABSTRACT

Glaucoma is worldwide leading cause of irreversable vision loss. Because it may be asymptomatic until a relatively late stage, diagnosis is frequently delayed. A general understanding of the disease pathophysiology, diagnosis and treatment may assist primary care physicians in referring high-risk patients for comprehensive ophthalmologic examination and in more actively participating in the care of patients affected by this condition. Ayurvedic system of medicine has a very scientific approach for its management. Its various principle of management and medicines can manage glaucoma effectively.

KEYWORDS: Adhimanth, Glaucoma, Ayurvedic system.

INTRODUCTION

Glaucoma is group of eye disease which result in damage to optic nerve and vision loss. A major risk factor is increased pressure in the eye. Glaucoma has been called the silent thief of sight because the loss of vision often occurs gradually over a long period of time and symptoms only occur when disease quite advanced.

Morden medicine has unique explanation for this condition and it has medical and surgical answer for this condition but these treatment are not 100% effective.

Glaucoma is the major blinding condition of present era occupying 1.79% of total blindness causing gradual deterioration of eye sight.medical management aimed to reduce intra ocular
pressure including topical and systemic medications. Unfortunately, these have many adverse effect that interfere with vision and eye organ.

In ayurveda, abhishyand and adhimanth co-related with glaucoma according to their sign and symptoms.

Intensity of symptoms of abhishyand greater than symptoms of adhimanth.

According to acharya, if abhishyand not properly treated leads to adhimanth.

**Pathogenesis of glaucomatous optic neuropathy**

The process of glaucomatous damage and the relationship with IOP and other potential influence is still poorly understood. One or both of the following mechanism may be involved.

1) Direct mechanical damage to retinal nerve fibres at the optic nerve head, as they pass through lamina cribrosa.

2) Ischemic damage- Possibly due to compression of blood vessels supplying the optic nerve head. This may relate to ocular perfusion pressure as possible risk factor for glaucoma.

3) Common pathway of damage- Both mechanism might lead to a reduction in axoplasmic flow, interference with delivery of nutrients or removal of metabolic products deterioration of neuronal growth factor, oxidative injury and the initiation of immune mediated damage.

**Symptoms of adhimanth**

Acharya Sushruta describe following symptots in adhimanth.

They mentioned in classic as intense pain feeling of eye, where eye seems to being extracted out and churned up along with involvement of half of head in association with specific features of doshas.

There are four types of adhimanth.
1) Vataj Adhimanth
- intense pain as eye being extracted out
- eye seems to be churned up
- foreign body sensation
- headache in halfside
- pricking sensation, bursting pain feeling of tension at eyes.

2) Pittaj Adhimanth
- redness of eyes
- watering from eyes
- burning sensation
- pain at eyes like kshar is applied on wound.
- eyes intensely inflamed and oedematous

3) Raktaj Adhimanth
- redness of eyes
- tenderness due to raised IOP
- throbbing pain at eyes
- ciliary congestion
- feeling tense at eyes

4) Kaphaj Adhimanth
Symptoms of glaucoma
Open angle glaucoma is painless and does not have acute attack, thus lack of clear symptoms, make screening via regular eye check up is important. The only signs are gradually progressive visual field loss and optic nerve changes.

About 10% of people with closed angle present with acute angle closure characterized by sudden ocular pain, seeing halos, red eye, very high intraocular pressure suddenly decreased vision and fixed, mid dilated pupil.

Cardial sign
1) high IOP
2) cupping of optic disc
3) visual field defect

Clinical examination
1. Screening for glaucoma is usually performed as part of standard eye examination. Testing for glaucoma should include measurements of intraocular pressure via tonometry.
2. Anterior chamber angle examination-gonioscopy.
3. Dialated eye examination- Examination of optic nerve to look for any visible damage to it, change in the cup to disc ratio and also rim appearance and vascular changes.
4. Visual acuity test
5. Visual field test (peripheral vision).
6. The retinal nerve fibre layer can be assessed with imaging techniques such as OCT, scanning laser ophthalmoscopy.

**MANAGEMENT OF ADHIMANTH**

**VATAJ ADHIMANTH**

द्रोणासिद्धि क्षिप्रवोधक व्यवस्थापनीयता ॥ स्त्रोतस्य व्यापारश्वर सिद्धन्त सिद्धांतेजसः जः प्रेमः ॥
संरक्षितावेदिपिसः समवेद विद्याविविधतिः ॥ तपोवः पृथवी रूप धृपालकमहलावः ॥
स्वरूपन्वेषणाऽथ सिद्धांतविभिन्नः च ॥ सूचि ३.९-३.४ ॥

Snehna with Puran Sarpi, Snidhga Swedana, Siramokshan, Snaihika Virechan followed by Basti, Tarpan, Putpaka, Aschyotan, Nasya, Sneha parisheka, Shirobasti should be applied.

**PITTAJ ADHIMANTH**

पित्तवन्दे पैतिक चालिमनो रक्ताभः च पन्नोऽधिष्वविषाय ॥
अति: स्कैकोरपत्मोजनानां प्रायः च स्वास्थ्यमिष्ठवसंविधानम् ॥ सूचि ३. १०-३ ॥

For elimination of the Dushya, Raktamokshana is performed, thereafter measures to treat Dosha are employed. Seka, Nasya, Anjan, Aschyotan, Lepa Kriyakalpa should be done. All procedure should be done with pittashamak draya.

**KAPHAJ ADHIMANTH**

स्वास्थ्यमिष्ठवसंविधानचक्रायं योगायातृत्वनिष्ठा मौखिकैः ।
स्वथाण्डीत्काषणश्चतुर्स्वचालनमंगे कालम्बंडुः ॥ ३॥
स्वरूपाः अवतन्त्रव्यवहारसाधीयः चुष्टि; पुष्पवाक्योऽभिः ॥ सूचि ३.११ ॥

In kaphaj adhimanth acharya Sushruta quoted that, after snehan swedan Raktamokshan is performed. Apatarpan, Avapeedan, Anjan, Dhoom, Seka, Pralepa, Kavalgraha, Aschyotan, Rooksha putpaka are useful.

**RAKTAJ ADHIMANTH**
Koumbh sarpi pan and mansras mixed with sneha should be used for intense pain. Nasya, Virechana, Anjan, Pralep, Parishek done with pittashamak dravya.

**Raktamokshan**

It is carried by leeches. The saliva of leeches contain anesthetic substance which deaden pain on the site and also bacteria inhibiting substance which inhibit growth of bacteria.

The saliva of leeches also contain bdells compound which acts as ant inflammatory agent by trypsin as well as plasmin. It also inhibits action of acrocin.

Another anti-inflammatory agent is the eglins. There are three compound in the leeches saliva that act as a vasodilator agent and they are the histamine like substance, the acetylcholine and corboxypeptidase A inhibitor, all these acts to widen the vessel causing inflow of blood to the site. Aqueous flows from the posterior chamber via pupil to the anterior chamber, from above it exit the eye via three routs.

1) trabecular
2) uveosacral
3) iris

90% aqueous flos through the trabecuum into the schlemm canal and episcleral vein.

Leeches sucks the peripheral blood, it creates negative pressure in the veins present locally and also leads to negative pressure in episcleral veins. This pressure facilitate the drainage of aqueous humor through the trabecular meshwork, it leads to decrease in IOP.

The patients who suffering from pain and inflammation will feel relief from the anti-inflammatory and anesthetic effect of leech saliva.

**TARPAN**

According to morden pharmacology various drugs used in the form of eye ointments, enter the eyeball by passing through the cornea and conjunctiva. This penetration depends upon the permability of various layers of cornea. The epithelium and endothelium is highly permissible for lipid content as compared to stromal layer, however only water soluble drugs
can penetrate the stromal layer. The conjunctiva is main intraocular route for entry of macromolecular and hydrophillic substance.

Ghrit which is generally used for tarpan,is saturated with decoction of chakshushya dravya. Hence, it contain both lipid and water soluble constitutes. Thus it has lipophilic as well as hydrophilic properties. Hence it has got very good penetration through various layers of cornea. Tarpan is in the the form of suspension caontaining unctuous nature and particle do not leave the eye as quick as other water based solution. this increases the tissue contact time and bioavailability. In this way, tarpan provide streghthening to all parts of eye to withstand increased intraocular pressure.

**BASTI**

Basti administrated through rectal route can be delivered for systemic circulation and act accordingly. Basti dravya is hyperosmotic solution causes movement of solvent from cell to lumen containing basti-dravya. Due to osmosis aqueous humor drainage are result in decreased IOP.

If adhimanth does not subside by these treatment modalities, Acharya Vagbhata describe para-surgical measure DAHAN KARMA used over eye brows.

Inspite of controlling intra-ocular pressure the rejuvenating medicine of ayurveda gives strength to optic nerve and hence restore the vision within limitation.

**ANJAN**

The drug in anjan is having katu, tikta, kashaya, amal, lavan, madhur rasa, laghu properties. katu vipak is having ushna, pachan kaphagna properties. kledopashan, sheshmopashaman properties.

Drug having madhur rasa and madhur vipak paases rasayan action all dhatus, patal as well as drishti are nourished. Thus by improving capacity of the eye. Tikta rasa shows its chedan properties, katu rasa is tikshna and possesses marga vivaran action because of above said inherited properties of drug, after getting absorbed it may scrap away the vitiated kapha, ama.

**CONCLUSION**

In treating glaucoma we should consider the patients presentation and extent of pathogenesis. The treatment necessitates formulation and therapies according to avastabheda. If condition
of glaucoma arises should be manage by the use of various drugs and principles as described earlier.

**BIBLIOGRAPHY**


