



## Review Article

# Management of Geriatric Eye disorders with Ayurvedic Measures

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### Abstract:

The deterioration of vision in elderly people is a major health problem. Like every part of our body, our eyes change as we grow older. Aging of the eyes affects all ocular structures. By the age 50, one in every three has some vision impairing eye disease. Common Geriatric eye problems are Cataract, Glaucoma, Age related Macular degeneration (AMD), Diabetic Retinopathy, Dry eye syndrome, Ptosis, Entropion, Ectropion, Floaters, Blepharospasm etc. The prevalence rate of each of these ocular conditions increases with age. Three fourth of all blindness and vision impairment are either preventable or treatable. The biggest challenge with Geriatric eye problem is that in most of the cases the condition cannot be attributed to a single cause. Ayurveda has the interventions those enhance physiological processes that influence metabolic and immunological status, (like *Chyavanprasha, Triphala*) & such interventions are significant in the context of Geriatric care. Subsequent eye diseases were reviewed from Ayurvedic and biomedical literature and corresponding preventive strategies were searched. The review elaborates over the concept of geriatric eye disorders and their management through *Dincharya, Ritucharya, Rasayana* therapy, *Yoga, Kriyakalpas* of eye and *Panchakarma* procedures. It would be appropriate to consider these time tested ancient measures on scientific parameters so that Ayurveda can help the sufferings in a better way.

**Key Words:** Geriatric eye problems, vision impairment, Ayurvedic measures

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### Introduction

The deterioration of vision in the elderly is a major health care problem. Approximately one person in the three has some form of vision reducing eye disease by the age 65. [1, 2]

Functional abilities, independence (Driving & cooking), and qualities of life issues (Reading, watching TV, seeing grandchildren) & mental health are of great concern to Geriatricians and their patients. [3] Elderly people generally wish to live independently as long as possible which requires them to be able to engage in self-care and other day today activities. Vision impairment is associated with a decreased ability to perform activities of daily living

and an increased risk for depression. [4]

Often the treatment is as simple as prescribing spectacles (as in Presbyopia) or operation (as in case of cataract). Three fourth of all blindness and vision impairment are either preventable or treatable. [5, 6]

Most of the eye ailments occurring in today's era are unfortunately lifestyle related. Long hours of work, travel, irregular food habits, entertainment like television and computers including smoking & drinking habit play their role in early stages i.e. young adults (between 30- 45 years of age). These causes lead to degenerative and regenerative diseases of the eye like early Presbyopic changes

(before 40 years), Age related macular degeneration, Diabetic Retinopathy, Glaucoma, early cataract formation, dry eye syndrome and many others.[7,8]

Even though numbers of treatment modalities are available, unfortunately the results of most of these have been disappointing. [9] Success of treatment has been measured in terms of only arrest of vision loss rather than gain in vision. [9] Which suggests that the existing measures and technologies are not enough to solve these problems.

Ayurveda on the other hand has interventions those enhance physiological process and immunological status i.e. health promoting agents. *Rasayana* is a method to slow down the aging process in the human being during degenerative phase of one's life. [10]

## MATERIAL & METHODS

### National Policy-

One of the basic human rights is the right to see. We have to ensure that no citizen goes to blind needlessly or being blind does not remain so, if by reasonable development of skill and resources, sight can be prevented from deteriorating or if already lost, can be restored.

Science of Ayurvedic Ophthalmology goes hand in hand with this policy.

There are four major age related eye diseases mainly-

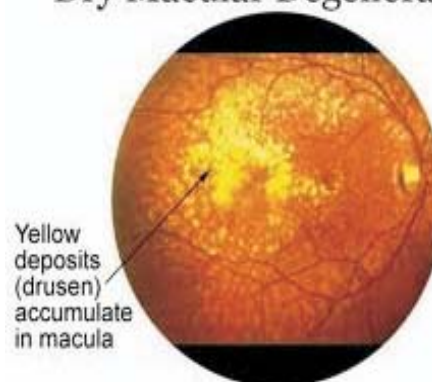
Age related Macular degeneration (AMD), Glaucoma, Cataract, Diabetic Retinopathy

**Age related Macular degeneration (AMD)**- It is a leading cause of blindness in patients over the age of 50 years. Macular degeneration is usually of older adults that results in a loss of vision in the center of the visual field because of damage to the retina. At least 10% of people aged between 65 and 75 will have lost some central vision due to AMD. [7] In those older than 75 years, 30% will be affected to some degree. The usual symptoms are- Blurred vision, Central scotomas (shadows or missing areas of vision in the center of visual field), Distorted vision (i.e. metamorphopsia) – A grid of straight lines appears wavy, Color confusions, Slow recovery of visual function after exposure to bright light. [11, 12]

AMD occurs in dry (90% of cases) and wet (10 % cases) forms. Dry AMD begins with small, discrete, slightly elevated yellow deposits called drusen in the macula at the posterior pole of both fundi. [Fig-1]

**Fig-1** Dry macular degeneration

## Dry Macular Degeneration



In case of wet AMD due to abnormal new blood vessels formation, there will be sudden haemorrhage & loss of vision. Modern treatment modalities available are laser photocoagulation, photodynamic therapy, injections (for wet AMD) and formulations of antioxidant and zinc (for dry AMD). [13,14]

According to Ayurveda, macular degeneration is *Vata* (dry AMD), *Pitta* (wet AMD) predominant. So *Vata Shamanchikitsa* concentrating on head and eye is necessary. For this *Brimhananasyam*, *Sirobasti*, *Sirodhara* by oil, *Netratarpana* etc. are beneficial. Medicine for each of these procedures should be selected very carefully according to the body constitution of the patient, age, mental status of the patient. [15-17]

In wet AMD, it is very important to start the treatment immediately otherwise persistent oedema will make irreversible damage in retina. *Pittashamana*, *Chakshushya* and *Rasayan* drugs are suitable for this. Some *Rasayan* drugs for eye diseases are *Jyotishmati* (*Celastrus paniculata*), *Triphala* (Three myrobalans), *Satavari* (*Asparagus racemosus*), *Yastimadhu* (*Glycyrrhiza glabra*) and *Amalaki* (*Emblica officinalis*).[18,19]

The treatment procedure should be mainly

*Ksheerdhara, Netrasekam, Bidalakam* etc.[20,21]

**Glaucoma**-it is a group of disorders which causes glaucomatous optic nerve damage that lead to direct vision loss as a result of increased intraocular pressure. The most prevalent form of glaucoma is Primary open angle glaucoma.[22]

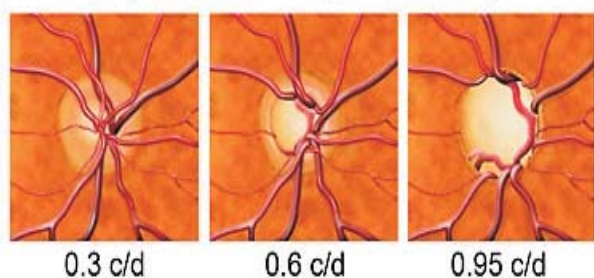
Primary open angle glaucoma- 'Silent thief of sight', most of the patients will be unaware of the development of the disease. In early stages, there will be no visual symptoms. Mild headaches, heaviness, feeling of fullness in the eyes, decrease in distant vision & visual field especially peripheral. [Fig-2] and increased optic disc cupping [Fig-3] are the main symptoms

**Fig-2** : Decrease in distant vision & visual field in Glaucoma



**Fig-3** : Fundus photograph demonstrates glaucomatous optic disc cupping and pallor

**Glaucoma progression**  
(measured in cup-to-disc ratio)



Primary angle closure glaucoma- onset is sudden. In most of cases redness of eye, congestion of vessels, severe pain, photophobia, headache are the main symptoms.[22]

According to *Ayurveda*, glaucoma is best correlated with a condition known as *Adhimantha* and is of four basic type i.e. *Vataj, Pittaj, Kaphaj, Raktaj*. [23] Generally speaking *Vata* regulates retinal nerve function whereas *Kapha* nourishes the eye and *Pitta* acts to drain it in context with *Adhimantha*. Ayurvedic management of glaucoma consists of four modalities diet regulations, *Panchakarma* treatment, oral medicines, *Yoga* & meditation.

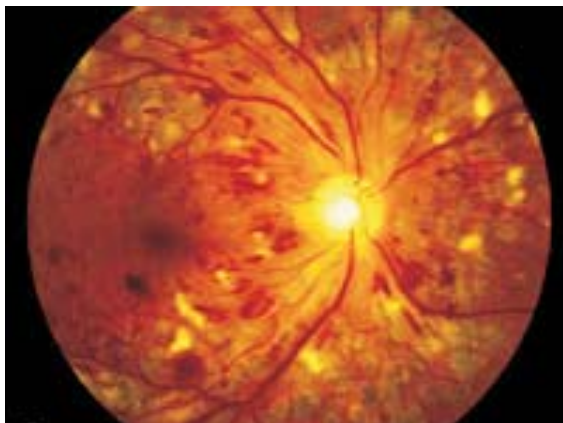
The rejuvenating medicines of *Ayurveda* (*Rasayana*) give strength to the optic nerve & hence restore the vision within limitations. Diet for prevention & cure of glaucoma should be rich in vitamins & minerals which include zinc, copper, antioxidant, vitamin C, B, E, A & Selenium.[24,25] *Panchakarma* procedure like *Thalam, Sirodhara, Nasyam, Virechana, Netradhara, Anjana* are of great help in glaucoma.[26] In oral medications daily use of *Triphala Churna, Haritaki Churna*, in early stages of glaucoma is very useful. *Mahatriphala Ghrita, Punarnawadi Kwath* etc. can be given to the patients. [26, 27] *Yoga* & meditation are always beneficial & have played a vital role in curing every eye disease. It helps by reducing stress to reduce & prevent IOP.[24] Apart from this Acharya Vagbhata described para-surgical measures like *Dahan Karma* & *Jalaukacharan*.[28]

**Diabetic Retinopathy (DR)**-it is the significant cause of vision morbidity in the elderly population. The prevalence of DR rises with increasing duration of Diabetes. However significant DR may be observed in the elderly at the time of diagnosis or during the first few years of diabetes. It is to be remembered that even though blood sugar level is within normal limits, there are chances of developing DR in a diabetic patient. Signs & symptoms: - Blurred vision & gradual vision loss, floaters, photophobia, scotomas in vision.[29]

Stages of DR- Non proliferative, Proliferative DR [Fig-4] [30,31]



**Fig-4 :** Proliferative Diabetic retinopathy

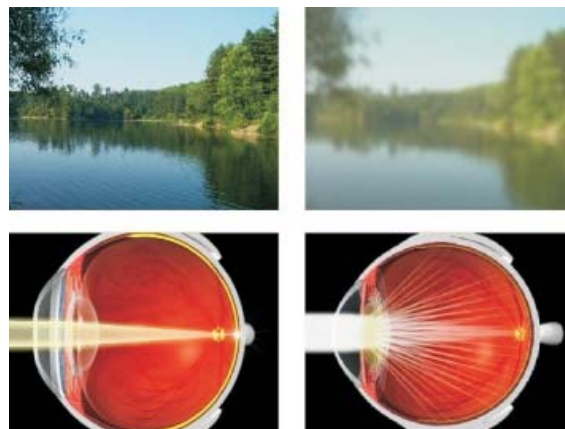


According to *Ayurveda*, the course of DR can be classified into three stages

- Initial stage of *Kapha* dominance (*Netrabhishyanda*) - The line of treatment *Sirodhara*, *Nasyam*, *Gandusham*, *Kaval* etc. are more preferable in this stage than ophthalmic application as there will be no considerable ophthalmic symptoms.
- Stage of *Pitta* dominance- There will be considerable visual problems. The patient may experience blurring of vision, sudden decrease in vision, metamorphosis, photophobia etc. *Pitta Shaman* should be the line of treatment. *Sirodhara*, *Netrasekam*, *Bidalaka*, *Aschotanam*, etc. are preferable. *Ayurvedic* herbs not only reverse the blood clots formed in retina & vitreous but also strengthen the metabolic function so that further chances of blood leakage can be minimized. All things are possible only if there is strict control of blood sugar.
- Stage of *Tridosha* predominance or stage of complication- the treatment varies according to particular complication. For example if it is detachment *Vata* predominant should be considered, if there is neovascularisation, *Pitta* should be considered more. The treatment should vary accordingly.[32,33]

**Cataract-** It is the most commonly seen disease of old age responsible for highest percentage of blindness worldwide. Symptoms of cataract: - hazy vision [Fig-5], photophobia, watering of eyes.[34]

**Fig-5 :** Vision in cataract



Cataract in *Ayurveda* is thought to be due to vitiation of all three *Doshas* i.e. *Vata*, *Pitta*, *Kapha*. *Ayurveda* believes that cataract can be reversed if it is diagnosed in initial stage. *Ayurvedic* treatment modalities like *Virechana*, *Anjana*, *Aschotanam*, & oral medications like *Chakshushya rasayan* drugs slow down or arrest the progression of cataract from immature to mature stage[Fig-6].[35]

**Fig-6 :** Mature cataract



Other Geriatric eye disorders are Presbyopia, Dry eye syndrome, Entropion, Ectropion, Ptosis, Floaters, Blepharospasm etc.

**Presbyopia-** It is a very common vision disorder that occurs & worsens as the person grows old. Presbyopia results in the inability to focus up the close objects. This can be corrected with refraction simply.[36]

Because of our lifestyle changes, more use of computers, watching TV and lack of exercise, the eye's natural lens hardens and as a result, the eye is not

able to focus light directly on to the retina. But we care about eyes, light yoga exercise, eye exercise, diet regulations, doing *Netrakriyakalpas* like *Tarpana*, *Netradhawan* regularly & some intake *Netrarasayan* drugs, we can arrest the lens hardening earlier (before 40-45 age) and also prevent further degenerative process of the eye.[37]

#### DISCUSSION :

Vision is the priceless gift from God, blessing us to enjoy the beauty of this world. Eye , being the most delicate organ in human body, need special care and geriatric age is the phase of life that require more and more attention to enjoy functional abilities, independence, qualities of life and mental health.[3]

One of the basic human rights is the right to see. We have to ensure that no citizen goes to blind needlessly or being blind does not remain so. Science of Ayurvedic Ophthalmology goes hand in hand with this policy.

The diseases that affect geriatric eye sight include Age related Macular degeneration (AMD), Glaucoma, Cataract, Diabetic Retinopathy, Pressbyopia, Dry eye syndrome, Entropion, Ectropion, Ptosis, Floaters, Blepharospasam etc. but treated in time with skill of experience, the sight can be protected, at least minimize the deterioration.

Ayurveda procedures provide effective treatment; with regards to *Akshitarpana*, *Anjana*, etc which have to be conducted under utmost medical or aseptic conditions, to prevent untoward effects. *Rasayana Karma* for eye, *Netrakriyakalpas*, *Ritucharya*, *Dinacharya*, Diet regulations, *Panchakarma* & *Yoga* provides significant benefits which can slow down or arrest the aging process of eyes in the human being during degenerative phase of life.

#### CONCLUSION :

The drugs used in modern medicine in the management of Geriatric eye disorders have its own limitation and the success rate of surgery (Glaucoma, Diabetic Retinopathy, Retinal detachment) is very low. For which the Indian system of medicine has a lot to offer in the treatment of Age related Macular degeneration (AMD), Glaucoma, Cataract, and

Diabetic Retinopathy.

A variety of systemic and local procedures were practiced for these conditions. But today perhaps they are absolutely of limited practice, Hence it would be appropriate to try these time tested ancient measures on scientific parameters so that Ayurveda can help the sufferings in a better way.

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