Retinitis Pigmentosa - An Ayurvedic View

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ABSTRACT

Retinitis Pigmentosa is a genetically determined dystrophy of the retina, almost invariably occurring in both the eyes. Beginning in childhood and often resulting in blindness in middle or advanced age. Night blindness is also one of the features of retinitis pigmentosa, Naktandya is seen in Kapha Vidagda Drishti, Nakulandya, Hriswajadya and Doshandya. The age of onset, rate of progression, eventual visual loss and associated ocular features are frequently related to the mode of inheritance. RP may occur as an isolated sporadic disorder, inherited as autosomal dominant (AD), autosomal recessive (AR), or X-linked. Retinitis Pigmentosa should be considered as Triteeya Patalagata Roga. The involved Dosha is Vata Pradhana Tridosha. Sodhana Karma and Kriyakalpas judiciously used not only improve the circulation but also provide micronutrients to the retina there by preventing the deterioration of retina.

Key words: Retinitis pigmentosa, Naktandya, Kriya Kalpa.

INTRODUCTION

Eyes are one of the most important organs of the body. The retina is the innermost, light sensitive layer of the eye where the visual image of the world is created by eye optics. Light striking the retina initiates a cascade of chemical and electrical events that trigger nerve impulses. These are sent through the optic nerve fibres to the visual centre of the brain, resulting in visual perception.

Retinitis Pigmentosa is a genetically determined dystrophy of the retina, almost invariably occurring in both the eyes. Beginning in childhood and often resulting in blindness in middle or advanced age. The degeneration affects primarily the rods and cones, particularly the former, and commences in a zone near the equator of the eye gradually spreading both anteriorly and posteriorly. The macular region is not affected until a late stage. Its prevalence rate is 1:5000. Night blindness is also one of the features of retinitis pigmentosa, Naktandya is seen in Kapha Vidagda Drishti, Nakulandya, Hriswajadya and Doshandya. The age of onset, rate of progression, eventual visual loss and associated ocular features are frequently related to the mode of inheritance. RP may occur as an isolated sporadic disorder, inherited as autosomal dominant (AD), autosomal recessive (AR), or X-linked. Retinitis Pigmentosa should be considered as Triteeya Patalagata Roga. The involved Dosha is Vata Pradhana Tridosha. Sodhana Karma and Kriyakalpas judiciously used not only improve the circulation but also provide micronutrients to the retina there by preventing the deterioration of retina.

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Prevalence and demography

Prevalence - It occurs in 1 person per 5000 of the world population.
Age - It appears in the childhood and progresses slowly, often resulting in blindness in advanced middle age.
Sex - Males are more commonly affected than females in a ratio of 3:2

Laterality - Disease is almost invariably bilateral and both eyes are equally affected.

Pathogenesis
Retinitis Pigmentosa conditions are characterized by death of rod photoreceptors. The molecular mechanism by which the genetic mutation eventually causes rod cell death are unclear, although apoptosis is involved in the final pathway of cell death.

Clinical Features
A. Visual symptoms
1. Night blindness
It is the characteristic and earliest feature and may present several years before the visible changes in the retina appears. It occurs due to degeneration of the rod cells
2. Dark adaptation
Light threshold of the peripheral retina is increased; though the process of dark adaptation itself is not affected until very late.
3. Tubular vision
Loss of peripheral vision with preservation of central vision occurs in advanced cases.

B. Fundus changes
1. Retinal pigmentary changes - These are typically perivascular and jet-black spots resembling bone corpuscles in shape. Initially, these changes are found in the equatorial region only and later spread both anteriorly and posteriorly.
2. Retinal arterioles are attenuated and may thread like in late stages
3. As the pigment from the retinal pigmentary epithelium migrates in to the retinal layers, the epithelium itself becomes visible and the fundus appears tessellated.
4. The disc exhibits the characteristics of primary optic atrophy.
5. Other associated changes which may be seen are colloid bodies, choroidal sclerosis, cystoid macular oedema, atrophic or cellophane maculopathy.

C. Visual field changes
1. Annular or ring-shaped scotoma is a typical feature which corresponds to the degenerated equatorial zone of retina.

Associations of Retinitis Pigmentosa
Occular associations include myopia, primary open angle glaucoma, microphthalmus, conical cornea and posterior sub capsular cataract.

Systemic association include-
1. Laurens moon bedle syndrome
2. Cockayne’s syndrome
3. Refsums syndrome
4. Ushers syndrome
5. Hallgrens syndrome
Diagnosis

The diagnosis of RP relies upon documentation of progressive loss in photoreceptor cell function by electrophysiological (electroretinography (ERG)) and visual field testing.

Treatment[7]

1. Measures to stop progression, which includes vasodilators, placental extracts, transplantation of rectus muscles in to suprachoroidal space.
2. Correct any refractive error, prescribe glasses.
3. Low vision aids in the form of magnifying glasses and night vision device.
4. Rehabilitation of the patient should be earned out as per his socioecnomic background.

Ayurvedic View

Classical texts of Ayurveda have considered congenital blindness (Jatyandha) under Adibala Pravritta and Janmabala Pravritta diseases.

One of the main feature of Retinitis Pigmentosa is night blindness. This is seen in Dosandha, Nakulandhya, Dhumadarsi and Hriswajadya. Even in advanced Timira, similar clinical features are seen.

The line of treatment of RP involves mainly improving the function of Alochaka Pitta by providing Ghrita Pana, Sneha Virechana and Sneha Basti.

To normalise the functions of Vata by Vatahara and Rasayana measures. Various Kriya Kalpas helps to alleviate Vata. Tarpana and Putapaka play an important role in this. Nasya Karma, Sirobasti are also useful to achieve this.

Samprapti Ghataka

Dosha - Alochaka Pitta and Tarpaka Kapha
Vyaktasthana - Netra Patala
Dushya - Rasa and Rakta
Adhishtana - Drishti
Srotas - Rasavaha and Raktavaha
Agni - Jatharagni and Dhatwagni
Roga Marga - Madhyama

Dosandha

In this disease the person sees things when the Dosas get move out of the path of vision due to the sun rays. So, the person sees only in the day time but difficult at night.

Nakulandha

By the aggregation of all the Doshas, the eyes of the person appears as that of mungoose. In this disease the person sees the objects in day time but difficulty of vision at night time.

It is a Tridoshaja Asadhya Vyadhi.

Dhumadarshi

Drishti gets vitiated by Shoka, Jvara, Ayasa, Shirashoola and person sees all objects smoky. It is a Pittaja Sadhya Vyadhi.

Hriswajadya

It is a Pittaja Asadhya Vyadhi. The patient of Hriswajadya will see the objects during the day with difficulty. Visualising all objects smaller than their normal size and hence the name Hraswa (smaller vision) Jadya (disease). This disease is one among the type of Nakthandhya according to sage Videha, whereas Acharya Sushruta and Acharya Madhava have described it as a defective vision only in day time.

General Treatment

1. Ghritapana
2. Nasya Karma
3. Anjana
4. **Rasayana**
   - If a person consumes *Triphala*, *Satavari*, *Patola*, *Amlaka* and *Yava* every day then the person will not have fear of dreadful *Timira*.
   - *Payasa* prepared from *Shatavari* alone or that prepared from *Amlaki* or *Yavoudana* mixed with ghee, followed by drinking *Triphala Kashaya* cures *Timira*.
   - Leaves of *Jeevanti*, *Sunisannaka*, *Tanduliyaka*, *Vastuka*, *Mulakapotika* and meat of birds and animals of aired region are all good for eye sight.

5. **Netratarpana**
   Common *Tarpana Yogas* given below
   - *Jeevanthyadi Ghrita*
   - *Triphaladi Ghrita*
   - *Mahatriphaladi Ghrita*
   - *Patoladi Ghrita*

6. **Putapaka**
   *Prasadana* and *Snehana* type of *Putapaka* is beneficial for *Vataja Timira*. *Snehana* type of *Putapaka* is prepared with *Medas-Majja-Vasa* and *Mamsa* of *Bhushaya*, *Prasaha*, *Anupa* or *Jivaneeya Gana* drugs. *Prasadana* type of *Putapaka* should be done with liver, bone marrow, muscle fat, meat of animals and drugs of *Madhura Gana* mixed with *Stanya* or cow’s milk mixed with ghee.

7. **Shirobasti**
   *Shirobasti* means pooling the liquid medicines, especially medicated oils and or ghee in a chamber or compartment constructed over the head. Medicated oil prepared with *Nata*, *Nilotpala*, *Ananta*, *Yasti* and *Sunishsannaka* is ideal for *Shirobasti*. It can also be used in *Nasya*.

8. **Basti**
   Common *Basti Yogas* for this condition
   - *Sthiradi Yapana Basti*
   - *Musthadiyapana Basti*
   - *Madhutailika Basti*
9. **Virechana**[^27]

*Virechana* is done with administration of medicines after internal and external oleation and sudation. This helps in removing toxins from the body and bring equilibrium of the *Doshas* especially *Pitta*. In *Vataja Timira Eranda Taila* mixed with milk should be administered.

**CONCLUSION**

Retinitis pigmentosa is inherited; degenerative eye diseases that cause severe vision impairment due to the progressive degeneration of rod photoreceptor cells in retina. In *Ayurveda* the signs and symptoms of retinitis pigmentosa can be compared with *Kapha Vidagdha Drishti*, *Naktandhya*, *Nakulandhya*, *Hraswajadya* and *Doshandhya*. Retinitis Pigmentosa should be considered as *Triteeya Patalagata Roga*. The involved *Dosha* is *Vata Pradhana Tridosha*. *Sodhana Karma* and *Kriyakalpas* judiciously used not only improve the circulation but also provide micronutrients to the retina thereby preventing the deterioration of retina.

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