



Case Study

A RIVETING CASE STUDY ON RETINITIS PIGMENTOSA THROUGH AYURVEDIC MANAGEMENT

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ABSTRACT

Retinitis pigmentosa (RP) defines a clinically and genetically diverse group of diffuse retinal dystrophies initially predominantly affecting the rod photoreceptor cells with subsequent degeneration of cones with a prevalence of 1:5000. It appears in the childhood and progresses slowly, often resulting in the blindness in advanced middle age. In *Kaphavidagdha drushti* the patient will be able to visualize in a better way because of *Kaphalpata* in day time, when this *Dushita kapha* enters *Tritiya patala*, there manifests *Naktandhyata*.

A male patient aged 28 years approached our OPD complaining of progressive diminution of vision since 10 years. Visual loss started with Nyctalopia further gradually affecting the peripheral vision in the day time. Even colour vision was also affected; among the primary colours he feels difficulty in recognizing blue colour. On fundoscopic examination, pallor disc with attenuated blood vessels and bony specules were found and he was diagnosed as a case of Retinitis pigmentosa.

After proper assessing *Rogi* and *Roga bala*, treatment was adopted as explained by our *Acharyas* in the line of *Kaya shodana*, *Shira shodana*, *Kriyakalpas* and *Rasayana prayogas*. The chemical constituents and other phytonutrients of the drugs used in this case has the ability to cross the ocular barriers and thereby giving good results in treating this patient thereby improving the quality of life of the patient.

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INTRODUCTION

Retinitis pigmentosa defines a clinically and genetically diverse group of diffuse retinal dystrophies initially predominantly affecting the rod photoreceptors with subsequent degeneration of cones. At the beginning, there is degeneration of the rods and cones along with the pigment epithelium and migration of the pigment into the retina mainly around the blood vessels. Later on, the ganglion cells and their axons also degenerate and they are replaced by neuroglial tissue. The blood vessels become attenuated and the disc assumes a waxy yellow appearance and is often termed as 'consecutive optic atrophy'. Pathogenesis involves molecular mechanism which in turns causes gene mutation there by leading to apoptosis causing death of rod photoreceptors in early stages with subsequent degeneration of cones. The age of onset, rate of progression, eventual visual loss and

associated ocular features are frequently related to the mode of inheritance. It occurs in 1 person per 5,000 of the world population. It appears in the childhood and progresses slowly, often resulting in blindness in advanced middle age. No race is known to be exempt or prone to it. Males are more commonly affected than females in a ratio of 3:2.

Diagnostic criteria for RP comprise bilateral involvement, loss of peripheral vision. The classic clinical trial of retinitis pigmentosa are (a) arteriolar attenuation (b) retinal bone spicule pigmentation and (c) waxy disc pallor. Visual symptoms of retinitis pigmentosa include night blindness, impaired dark adaptation and tubular vision occurs in advanced stages. There may be other ocular and systemic associations also. The ocular associations are posterior subcapsular cataracts, open angle glaucoma, myopia,

keratoconus, vitreous changes-vitreous detachment and occasionally intermediate uveitis, optic disc drusen.^{1,2}

In *Kaphavidagdha drushti* the patient will be able to visualize in a better way because of *Kaphalpata* in day time, when this *Dushita kapha* enters *Tritiya patala*, there manifests *Naktandhyata* which simulates Retinitis pigmentosa of modern science.³

Case study

Pradhana vedana (Chief complaints): A male patient aged 28years approached our OPD with the C/O Progressive diminution of vision since 10 years.

Pradhana vedana vruttanta (History of present illness)

- In the year 2007, patient noticed diminution of vision in the dim light, which used to start after 5:30 pm. The vision was normal during day time and was deteriorating at night times, which he did not express to his parents but his family members observed him tumbling to the objects during night hours. He was taken to nearby eye hospital (details of examination not available) where he was informed that there is no treatment available for this condition.
- Later he was taken to various other hospitals like Vasan eye care, Retina institute of Karnataka where he was given vitamin supplements and he was informed that there is no treatment for this condition.
- From 2014, gradually the symptoms started worsening. He observed blurriness of vision during day time wherein he could notice increased blurriness in the peripheral part of vision.
- The colour vision was also affected; among the primary colours he feels difficulty in recognizing blue colour.
- With all these he was finding difficulty in performing his daily activities.

Koutumbhika vruttanta (Family history): He is the only son with 3 elder sisters and all are said to be healthy.

Vayaktika vruttanta (Personal history)

- ❖ Diet - Mixed, Non-veg – once/week
- ❖ Appetite - Moderate
- ❖ Sleep - Disturbed
- ❖ Bladder - 3-4 times/day, 1/night
- ❖ Bowel - Daily once/regular
- ❖ Habits - None

Vyavasayika vruttanta (Occupational history):

As day vision is also impaired, patient is scared to go out and work.

Roga pariksha

Ashta sthana pariksha

- ❖ **Nadi** - 74 beats/min
- ❖ **Mala** - once daily, regular
- ❖ **Mutra** - 3-4 times/day, 1/night
- ❖ **Jihwa** - *Alipta*
- ❖ **Shabdha** - *Prakruta*
- ❖ **Sparsha** - *Prakruta*
- ❖ **Druk** - *Vikruta*
- ❖ **Akruthi** - *Madhyama*

Dashavidha pariksha

- ❖ **Prakruti** - *Kapha, Vata*
- ❖ **Vikriti**

Hetu - *Bheejopaghata*

Precipitating factors

Shleshmala ahara - *Dadhi, Masha ati sevana*

Vihara - Not at all applying oil to the *Shiras, Divaswapna*

Dosha - *Kapha dosha* along with *Vata* and *Alochaka pitta*

Dushya - *Rasa, Rakta, Mamsa, Meda*

Prakriti - *Chirakari*

Desha - *Jangala*

Kala - *Visargakala*

Bala - *Madhyama*

- ❖ **Sara** - *Madhyama*
 - ❖ **Samhanana** - *Madhyama*
 - ❖ **Pramana** - Ht- 156cms, Wt- 48 kgs
 - ❖ **Satmya** - *Madhyama*
 - ❖ **Satva** - *Madhyama*
 - ❖ **Aharashakti**
- Abhyavarana shakti** - *Madhyama*

Jarana shakti - *Madhyama*

- ❖ **Vyayama Shakti** - *Madhyama*
- ❖ **Vaya** - *Madhyama*

Vishishta Pariksha

Cardio Vascular System: S1, S2 heard, no added sounds or murmurs.

Respiratory System: Bilaterally symmetrical chest with vesicular breath sounds heard.

GIT system: No abnormalities detected.

Central Nervous System: Well Conscious & Oriented to time, place and person.

Netra Pariksha-Ocular Examination**Visual Acuity**

Visual Acuity	DV (Without spectacles)	NV (Without spectacles)
BE	6/24p	N12p
RE	6/60	N36
LE	6/36	N24p

EXTERNAL OCULAR EXAMINATION:

1. Head posture - Normal.
2. Forehead and facial symmetry – Normal.
3. Orbit – No abnormality detected.
4. Eyebrows – level of both eye brows – Normal and equally distributed cilia.
5. Eyelids – position, movements of eyelids, lid margin are normal bilaterally.
6. Lacrimal apparatus – Normal with negative regurgitation test.
7. Eyeballs – Normal position of eye balls with the presence of Nystagmus.
8. Conjunctiva and sclera - Normal.
9. Cornea w.r.t. size, shape, surface, transparency, sensation – Normal.
10. Anterior chamber depth is normal with the presence of normal transparent aqueous humour.
11. Iris-Colour is greyish black with regular pattern.
12. Pupil-centrally placed single pupil with normal size and shape having greyish black colour with the presence of pupillary reactions.
13. Lens -biconvex structure which is clear and transparent.
14. IOP - Right Eye - 12mm of Hg and Left Eye - 14mm of Hg.

Tests**Confrontation Test**

- Superior – 40 degrees.
 Inferior – 50 degrees.
 Laterally – 50 degrees.
 Medially – 50 degrees.

Amsler Grid Test: Blurred vision.**Colour Vision Test**

- Tritanomalous: Present
 Protanomalous: Absent
 Deuteranomalous: Absent

Fundus Examination**Bilateral:** Pallor disc, Attenuated blood vessels, Bony specules, RPE changes.**Nidana Panchaka****Nidana:** Bheejopaghata**Precipitating factors***Shleshmala ahara - Dadhi, Masha ati sevana**Vihara - Not at all applying oil to the shiras, Divaswapna***Samprapti***Beejopaghata along with precipitating factors.**Sthana samshraya of Doshas in Tritiya patala of Netra.**Sanga, Vimarga gamana and Atipravritti causing Drushti**bhagagata tejo dhatu vikruti.**Kapha vidagdha dushti***Sampraptighataka**

- *Dosha - Kapha, Vata and Alochaka pitta*
- *Dushya - Rasa, Rakta, Mamsa, Meda*
- *Agni - Jataragni mandya and Dhatwagni mandya.*
- *Srotas-Rasa, Rakta, Mamsa, Medovaha srotas*
- *Srotodushti prakara - Sanga, Vimarga gamana, Atipravritti*
- *Udhbhava sthana - Beeja bhaga.*
- *Sanchara sthana - Roopavaha siras*
- *Vyaktasthana - Netra*
- *Adhithana - Tritiya patala*
- *Rogamarga - Madhyama*
- *Sadhyasadyata - Sadhya*
- *Pratyatma lakshana - Naktandhya*

Roopa

“Doshho naktandhyan apadayati, diva sa suryanugrahita chakshurikshate, Rupani Kapha alpabhavat”, When dosha is of mild nature and affects all the three *Patalas*, the patient is sure to get night blindness. During the day the eyes are favoured by the sun and the patient can see objects on account of the *Kapha* getting less.

Upashaya

Feels better during sunny days.

Anupashaya

More diminution of vision during cloudy days.

Kapha vidagdha drushti – Retinitis pigmentosa

Chikitsa siddhanta

Vyavacchedaka nidana

- *Nakulandhya.*
- *Hruswajadya.*
- *Ushna vidagdha drushti*
- *Kapha vidagdha drushti*

- *Kaya shodhana*
- *Shiro shodana*
- *Kriyakalpa*
- *Shamanoushadhis*
- *Rasayana*

Diagnosis

Treatment protocol adopted

Days	Treatment	Medicaments
1-3	<i>Deepana and Pachana.</i>	<i>Chitrakadi vati</i> – 2TID, BF.
4-6	<i>Snehapana.</i>	<i>Mahatriphaladhya ghrita</i>
7-9	<i>Sarvanga Abhyanga and Bhaspa sweda</i>	<i>Dhanwantaram taila</i>
10	<i>Virechana karma</i>	<i>Trivrit lehya</i> – 60 gms.
10-15	<i>Samsarjana karma</i>	Thin rice gruel for 3 <i>Anna kalas</i>
		Thick rice gruel for 3 <i>Anna kalas</i>
		Thin Pongal for 3 <i>Anna kalas</i>
		Thick Pongal for 3 <i>Anna kalas</i>
		<i>Anna rasam</i> for 3 <i>Anna kalas</i>
		Started with normal diet
16-22	<i>Nasya karma</i>	<i>Mukhabhyanga</i> with <i>Murchita taila</i> <i>Nasya karma</i> with <i>Bringaraja taila</i> – 7 drops each nostrils
	<i>Padabhyanga</i>	<i>Dhanwantaram taila</i>
29-33	<i>Tarpana</i>	<i>Mahatriphaladhya ghrita</i>
34-36	<i>Putapaka</i>	<i>Kanadi putapaka</i>
44-91	<i>Anjana</i>	<i>Kanadi anjana</i> , once daily in the morning, followed by <i>Netra prakshalana</i> with <i>Triphala kashaya</i>

Internally

Triphala churna - 1tsp - at night -AF - with Honey and Ghee

Amalaki payasa - 30ml -BID - BF.

Observation and Results

Before Treatment			After <i>Snehapana</i>			After <i>Virechana Karma</i>		
	DV	NV		DV	NV		DV	NV
BE	6/24P	N12P	BE	6/24P	N12P	BE	6/18P	N6p
RE	6/60	N36	RE	6/36	N18	RE	6/18	N6p
LF	6/36	N24P	LF	6/36	N12P	LF	6/18p	N18P

After <i>Nasya karma</i>			After <i>Tarpana and Putapaka</i>			At follow up		
	DV	NV		DV	NV		DV	NV
BE	6/18P	N6p	BE	6/24	N12P	BE	6/24	N12P
RE	6/18	N6p	RE	6/24	N12	RE	6/24	N12
LF	6/18p	N18P	LF	6/24	N12P	LF	6/24	N12P

- ❖ Subjective improvement in the vision is seen.
- ❖ The patient is able to do his works alone.
- ❖ Night vision is improved where he can walk and recognise objects on his own during night hours.

DISCUSSION

- ❖ After proper assessing *Rogi* and *Roga bala*, treatment was adopted as explained by our *Acharyas* in the line of *Kayashodana*, *Shira shodana*, *Kriyakalpas* and *Rasayana proyogas*.
- ❖ "*Jita: samshodhanai tu na Tesham punarudbhava:*"⁴ the *Doshas* that are pacified by *Shodhana* never recur. Hence, as a protocol before any *Kriyakalpas*, to achieve maximum benefits, *Kaya shodhana* in the form of *virechana* and *Shiroshodhana* in the form of *Nasya* was done in the present case.
- ❖ **Ama pachana:** When *Shodhana purva Snehana* is to be administered, one should achieve *Niramavastha* of the diseases and if present *Amapachana* is considered as essential, where *Pachana* brings the *Sama dosha* to *Niramavasta*. *Chitrakadi vati* was given for this action.
- ❖ **Snehapana:** For *Snehapana*, *Mahatriphaladhya ghrita* being *Chakshushya*, when it was given in *Uttama matra pramana* it does *Pratyagra dhatu vriddhi:*, i.e., *Nootana dhatu utpatti*, which is the *Samyak sneha siddha lakshana*.⁵
- ❖ **Snehana (Abhyanga) and Swedana:** After *Samyak snigdha lakshana* are seen the patient was advised for *Sarvanga Abhyanga* and *Bhaspa sweda* in *Vishrama kala*. with the help of *Snehana* and *Swedana*, the vitiated *Doshas* will come to a state from which it can be expelled out easily through the nearest orifice. This is called the *Utklishta avastha* of *Dosha*. Further *Swedana* does *Vilayana* of the *Doshas* which are in *Grathita* form from the *Srotases* which helps to clear *Sroto Syandatwa*, "*srotaha su abhiviliyati*". *Dhanwantaram taila* contains *Paya*, *Sariva*, *Punarva*, *Shatvari*, *Yashti*, *Triphala* are having *Chakshushya guna* which further adds for getting good results.
- ❖ *Trivrit* being *Kapha pitta hara*, *Virechana* was given by *Trivrit lehya*.
- ❖ **Nasya karma:** "*Naso hi Shiraso dwaram*", nose being the gateway to the *Shiras* helps to eliminate the *Doshas* which disturbs the *Urdhwa jatru*. The drug administered through the nostrils reaches the *Shringataka (Siramarma)* distributed in *Murdha*, *Siramukha* of *Netra*, *Karna*, *Kanta* etc., scratches the morbid *Doshas* from the *Urdhwa jatru* just like removing *Munja* grass from its stem.⁶ *Brhingaraja taila nasya* was administered

for *Nasya karma* which is specifically mentioned as *Sadhya drushti prasadaka*.⁷

- ❖ Under *Virechana guna*, *Indriya balapradha*⁸ and for *Nasya karma*, *Drushtiprasadajanartham*⁹ are mentioned by our *Acharyas*, even in this case these features were observed as the *Chakshurendriya bala* was increased.
- ❖ After *Shodhana*, the vision was improved and the patient got confidence in him that he can perform his routine activities on his own. Earlier he was very much afraid even to go out alone.
- ❖ **Tarpana:** one of the ocular therapeutic is meant for giving nourishment to *Chakshurendriya*. *Tarpana* was advised by *Mahatriphaladhya ghrita* which contains *Triphala*, *Bhringaraja*, *Vasa*, *Ajaksheera*, *Guduchi*, *Kana*, *Draksha*, *Madhuka*. These drugs are considered as best *Chakshushya dravyas* which are *rasayana* also.
- ❖ **Putapaka:** A variant form of *Tarpana*, helps to strengthen the *Chakshurendriya bala* further. In this case *Kanadi putapaka* was given which is specifically mentioned for *Nakthandhya*.
- ❖ The tissue contact time in case of *Tarpana* and *Putapaka* is more and hence accelerates the bio-availability of the drugs causing higher absorption of the phytonutrients.
- ❖ **Kanadi putapaka and Kanadi anjana:**¹⁰ *Kana* being a *Katu rasa Pradhana dravya* has *netra Virechaka guna* further which helped to remove the accumulated *Doshas* from the *Netra*. *Aja yakrut* is having *Gunas* like *Na ati sheeta*, *Balya* and *Anabhishyandi* helps to increase the *Chakshurendriya shakti* along with this it is a good source of Vitamin A thereby enhancing the rods function.
- ❖ Other treatments like internal administration of *Amalaki Payasa*, *Padabhyanga*, *Netra prakshalana* being *Sadapathya* for ocular health gives added effect in getting good results.

CONCLUSION

On the basis of signs and symptoms the case was diagnosed as a case of Retinitis pigmentosa with sporadic inheritance which is isolated without family history falls into the umbrella of *Kaphavidagdha drushti*. The chemical constituents and other phytonutrients of the drugs used in this case has the ability to cross the ocular barriers and thereby giving good results in treating this patient thereby improving the quality of life of the patient. As per modern science, Retinitis pigmentosa has no treatment; here we can proudly say that our treatment has aimed at restoring the better functioning of *Chakshurendriya*.

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