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 proyogas. 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.

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 in which 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.

Diagnosis 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 28 years 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.

**Vyavatikaa 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

**Vyavasyika 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
- Akriti - Madhyama

**Dashavidha pariksha**

- Prakriti - Kapha, Vata
- Vikriti

**Hetu - Bheetopaghatra**

**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

**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

<table>
<thead>
<tr>
<th>Visual Acuity</th>
<th>DV (Without spectacles)</th>
<th>NV (Without spectacles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BE</td>
<td>6/24p</td>
<td>N12p</td>
</tr>
<tr>
<td>RE</td>
<td>6/60</td>
<td>N36</td>
</tr>
<tr>
<td>LE</td>
<td>6/36</td>
<td>N24p</td>
</tr>
</tbody>
</table>

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.
7. Eye balls – Normal position of eye balls with the presence of Nystagmus.
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

Bheejopaghata along with precipitating factors.

Sthana samshraya of Doshas in Tritiya patala of Netra.

Sanga, Vimarga gamana and Atipravritti causing Drushi 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
- Srotodushita prakara - Sanga, Vimarga gamana, Atipravritti
- Udhhavha sthana - Beeja bhaga.
- Sanchara sthana - Roopavaha siras
- Vyaktasthana - Netra
- Adhisthana - Tritiya patala
- Rogamarga - Madhyama
- Sadhyasadyata - Sadhya
- Pratytamaka lakshana - Naktandhya

Roopa

“Dosho naktandhyayan 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.
More diminution of vision during cloudy days.

**Vyavacchedaka nidana**
- Nakulandhya
- Hruswajadya
- Ushna vidagdha drushti
- Kapha vidagdha drushti

**Chikitsa siddhanta**
- Kaya shodhana
- Shiro shodhana
- Kriyakalpa
- Shamanoushadhis
- Rasayana

**Diagnosis**

**Treatment protocol adopted**

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

**Internally**
*Triphala churna* - 1 tsp - at night - AF - with Honey and Ghee
*Amalaki payasa* - 30 ml - BID - BF.

**Observation and Results**

<table>
<thead>
<tr>
<th>Before Treatment</th>
<th>After Snehapana</th>
<th>After Virechana Karma</th>
</tr>
</thead>
<tbody>
<tr>
<td>DV</td>
<td>NV</td>
<td>DV</td>
</tr>
<tr>
<td>RE</td>
<td>6/60</td>
<td>N36</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>After Nasya karma</th>
<th>After Tarpana and Putapaka</th>
<th>At follow up</th>
</tr>
</thead>
<tbody>
<tr>
<td>DV</td>
<td>NV</td>
<td>DV</td>
</tr>
<tr>
<td>BE</td>
<td>6/18P</td>
<td>N6p</td>
</tr>
<tr>
<td>LF</td>
<td>6/18p</td>
<td>N18P</td>
</tr>
</tbody>
</table>
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:”*, 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 Shirosodhana in the form of Naśya 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. Chitrakad vati was given for this action.

**Snehapana:** For Snehapana, Mahatrilahadhya ghrita being Chakshushyam, when it was given in Uttama matra pramana it does Pratyagya dhatu vridhi; i.e., Nootana dhatu utpatti, which is the Samyak sneha siddha lakshana.

**Snehana (Abhyanga) and Swedana:** After Samyak snigdha lakshana are seen the patient was advised for Sarvanga Abhyanga and Bhaspa sweda in Vishrana 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 Utklishtha avastha of Dosh. Further Swedana does Vilayana of the Doshas which are in Grathitha form from the Srotases which helps to clear Srot Syandatwa, “srotaha su abhivilyyati”. Dhanwantaram taila contains Paya, Sariva, Punarva, Shatvari, Yashthi, Triphala are having Chakshushyam ghritya which further adds for getting good results.

Trivrit being Kapha pitta hara, Virechana was given by Trivrit lehya.

**Naśya karma:** “Naso hi Shiras 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, Karma, Kanta etc., scratches the morbid Doshas from the Urdhwa jatru just like removing Munja grass from its stem. Brhingaraja taila nasya was administered for Naśya karma which is specifically mentioned as Sadhya drushthi prasadaka.

Under Virechana guna, Indriya balapradha and for Naśya karma, Drushtiprasadajanartham 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 Mahatrilahadhyam ghrita which contains Triphala, Bhringaraja, Vasa, Ajaksheera, Guduchi, Kana, Draksha, Madhuka. These drugs are considered as best Chakshushyam 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 Kanasi anjana:** Kana being a Katu rasa Pradhana dravya has netra Virechaka guna further which helped to remove the accumulated Doshas from the Netra. Ajayakrut 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 Sadapathyam 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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Cite this article as:

Source of support: Nil, Conflict of interest: None Declared

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