

AYURVEDIC MANAGEMENT OF RETINITIS PIGMENTOSA - A CASE STUDY

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ABSTRACT

Introduction- Retinitis pigmentosa is a rare, inherited degenerative eye disorder that causes severe vision impairment. In *Ayurveda*, cardinal symptoms of night blindness may be co-related with *Kaphavidagdha Drishti*.

Case- A 34-year-old non-hypertensive and non-diabetic male patient who presented to OPD of Patanjali ayurveda hospital with diminished and peripheral loss of vision in both eyes since 2015 is presented here. **Intervention-** Patient underwent Ayurvedic management consisting of specific *Kriya kalpas* (external therapies) procedures and oral medicines **Result-** Assessment showed improvement in distant visual acuity, fundus photographs, and OCT of both eyes. **Conclusion-** Results indicate that Ayurvedic treatment is safe and effective to reduce symptoms of Retinitis pigmentosa by improving the quality of life of the patient.

Keywords- Retinitis pigmentosa, *Kaphavidagdha Drishti*, *Kriya kalpa*.

INTRODUCTION

Retinitis pigmentosa is a rare, inherited degenerative eye disease that causes severe vision impairment. RP as a group of vision disorders affects about 1 in 3,000 to 1 in 4,000 people in the world¹. Symptoms often

begin in childhood. The most common form of retinitis pigmentosa is rod dystrophy in which night blindness is the first symptom, followed by progressive loss of peripheral visual field. As more cells die, the

person loses more of their peripheral vision until only the very center of their visual field remains, which is known as tunnel vision. **Pathogenesis-** RP is characterized by the death of rod photoreceptors. The molecular mechanism by which the genetic mutation eventually causes rod cell death is unclear, although ample evidence indicates that apoptosis is involved in the final pathway of cell death. **Clinic-investigative features-** symptoms of RP often begin in childhood. Typical RP i.e., rod-cone dystrophy, in which rods degenerate early and cones are involved late. Clinical features of RP can be studied under the following headings: visual symptoms, fundus changes, visual field changes, and electrophysiological changes. Visual symptoms-Night blindness- is the characteristic and earliest feature and may present several years before the visible changes in the retina appear. It occurs due to degeneration of the rods. Dark adaptation- the process of dark adaptation itself is not affected until very late. Tubular vision i.e., loss of peripheral vision with preservation of central vision occurs in advanced cases. Central vision is also lost ultimately after many years. Fundus changes-Retinal pigmentary changes are typically perivascular (around veins) 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. Retinal arterioles are attenuated (narrowed) and may become thread-like in late stages. Thinning and atrophy of retinal pigment epithelium are seen in the mid and far peripheral retina with relative sparing of Retinal pigment epithelium at the macula. The optic disc becomes pale and waxy in later stages and ultimately consecutive optic atrophy occurs. Other associated changes which may be seen are colloid bodies, choroidal sclerosis, cystoid macular oedema, and atrophic or cellophane maculopathy. Visual field changes-Annular or ring-shaped scotoma is a typical feature that corresponds to the degenerated equatorial zone of the retina. As the disease progresses, scotoma increases anteriorly and posteriorly, and ultimately only central vision is left (tubular vision). Eventually, even this is also lost, and the patient becomes blind. Electrophysiological changes-Typical electrophysio-

logical changes appear early in the disease before the subjective symptoms or the objective signs (fundus changes) appear. Electroretinogram is initially subnormal (scotopic affected before photopic; b-wave affected before a wave) and eventually extinguished. Electro-oculogram is subnormal with an absence of light peak. According to *Ayurveda*, the night is generally considered to be the time of *Kapha*. At the night, the properties of *Kapha* will be prominent (*Guru, Manda, Hima, Snigdha*, etc.). so *Kapha* will be increased and will function at the maximum level. Therefore, it is assumed that night vision is maintained by “*Netrashrita Kapha*”. When night vision is difficult, there will be vitiation of *kapha*. In other words, night blindness can be diagnosed as the vitiation of *Netrashrita kapha* i.e., “*Tarpakakapha*”. According to *Sushruta*, in the daytime due to sunlight, *Kupit kapha* is decreased and so vision is gained. So, in *Ayurveda* Retinitis pigmentosa have similar signs and symptoms to *Kapha vidagdha drishti*².

CASE PRESENTATION

34 years old non-hypertensive and the non-diabetic male patient presented to the OPD of Patanjali Ayurveda hospital with complaints of diminished vision in both eyes (left eye > right eye) along with difficulty in night vision in both eyes since 2015. His sister also suffered from the same problem. The patient was asymptomatic before 2015 then gradually he developed blurring of vision in the right eye during daytime as well as at night. For this, he went to one of the nearest private hospitals in Aligarh where he was diagnosed with retinitis pigmentosa for the first time. After all this, the patient came here to Patanjali Ayurveda Hospital for ayurvedic treatment in January 2020 as now developed blurring of vision in the left eye also and was having problems with day-to-day work.

- Unaided distant visual acuity- 3/60 in rt eye and HMCF in the left eye.
- Anterior segment examination revealed normal findings in both eyes.
- Pupillary examination revealed normal findings in both eyes.

Fundus examination-

On fundus examination, the C:D ratio of both eyes was normal. Retinal vessels of both eyes were attenuated. Macular reflex was absent in both eyes. Bony spicules in the equatorial region were present in both eyes and waxy appearance of the fundus in both eyes. OCT revealed cystoid macular oedema in both eyes.

THERAPEUTIC INTERVALS

Treatment was planned based on ayurvedic diagnosis as *Kapha vidagdha Drishti* with a focus on reversing the loss of vision. Treatment was taken from *Ashtang Hridayam* textbook³.

Table 1: Oral medicines

Medicines	Dose	Anupana	Duration
<i>Muktashukti bhasm</i>	125 mg	Lukewarm water	Twice a day before food
<i>Saptamrit lauh</i>	250 mg	Lukewarm water	Twice a day before food
<i>Amalaka rasayan</i>	3 gm	Lukewarm water	Twice a day before food
<i>Giloy sat</i>	125 mg	Lukewarm water	Twice a day before food
<i>Yashad bhasm</i>	50 mg	Lukewarm water	Twice a day before food
<i>Mahatriphaladi ghrī</i>	1 tsp	Milk	Twice a day after food
<i>Patoladi ghrī</i>	1 tsp	Milk	Twice a day after food

A combination of all these above medicines was given to the patient for one month and the same combination was continued for the next three months.

Table 2: *Kriya kalpa*

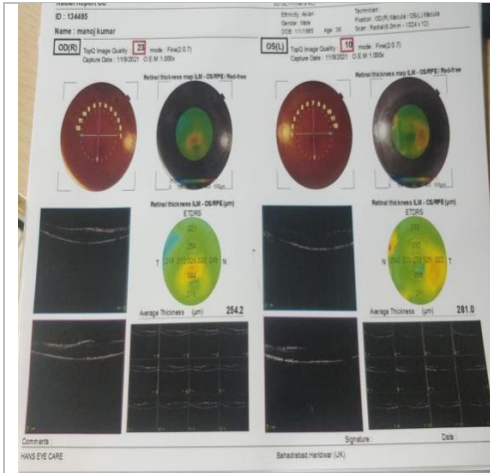
Procedure	Drug	Dose	Duration
<i>Shankh prakshalan</i>	Lukewarm water + <i>saindhav lavana</i>	-	1 st day in each sitting for 3 months.
<i>Netra parisheka</i>	<i>Triphala, daruharidra, manjishtha, giloy, tulsi</i>	-	In the morning, 3 sittings with gap of 7 days, Before <i>Nasya</i> .
<i>Nasya</i>	<i>Anu taila</i>	6-6 drops in each nostril	In the morning, 3 sittings with a gap of 7 days for 7 days.
<i>Tarpana</i>	<i>Patoladi ghrī</i>	-	In the morning, 3 sittings with a gap of 7 days for 7 days.
<i>Putapaka</i>	<i>Panchtikta dravyas</i>	-	After <i>Tarpana</i> , 3 sittings for last 3 days of <i>Tarpana</i> .

RESULTS

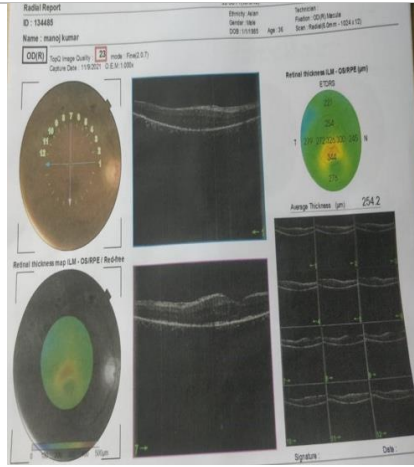
Results included checking for visual acuity which is a clinical measurement and involves testing at two distances, near vision (where the eye is focusing) and distance vision (where the eye's focusing is relaxed). In this case, the patient before treatment needed to be

located at 6 meters or less to read the chart, whereas a person with normal vision would have been able to read the chart from 60 meters. Patients were re-tested for visual acuity after treatment and in every follow-up. By the end of the treatment patient's visual acuity had improved upto 6/18.

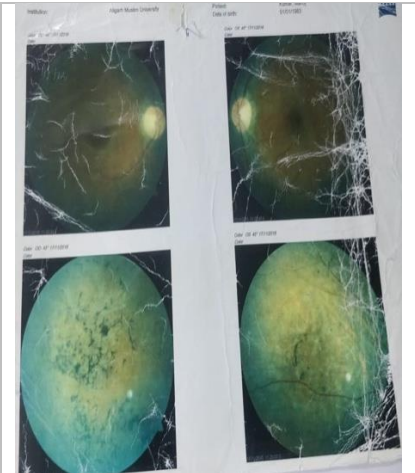
	Rt eye	Lt eye
During admission for retinitis pigmentosa	3/60 with pin 6/60	HMCF
First visit after treatment	5/60 with pin NI	6/24P with pin 6/18
Second visit after treatment	5/60 with pin 6/60	6/18P with pin 6/12P



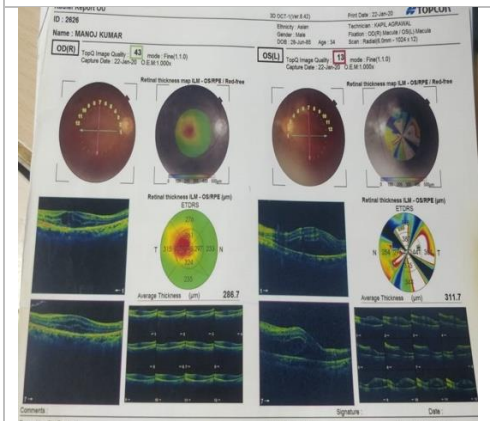
OCT scan OD & OS after treatment



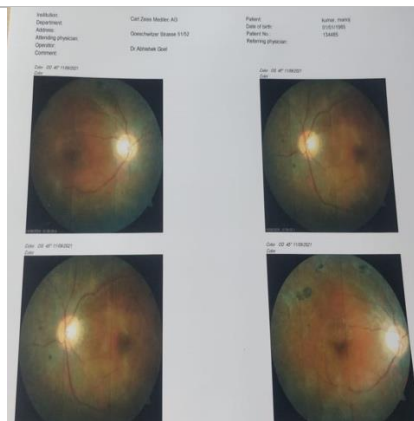
Fundus photograph and OCT scan OD & OS before treatment



Fundus photograph OD & OS before treatment



Fundus photograph and OCT OD & OS before treatment



Fundus photograph OD & OS after treatment

DISCUSSION

RP is a disease that occurs due to the vitiation of all the three doshas and is characterized by loss of vision during the day as well as at night-time. Because RP is an inherited and degenerative retinal disease, the patient can't have 20/20 vision (6/6 meters). Ayurvedic treatment was given to the patient both therapeutic procedures as well as oral medications and routine follow-ups were taken. After admission, on the very first day of each sitting *Shankh prakshalan* was selected as it is suitable for all pitta conditions and helped in the purification of the body in a short time. In this case, *Netra parisheka* with *Triphala*, *Daruharidra*, *Manjishtha*, and *Tulsi* helped in pacifying *kapha* and *pitta doshas*. *Marsh nasyam* i.e. administration of medicated drops in nostrils with *Anu taila*

helped in reducing *Kapha* dosha. *Tarpana* is a procedure in which lukewarm medicated ghee is made stagnant in the eyes for a speculated time in a specific formed frame (*Masha pali*), so here *Tarpana* with *Patoladi ghrita* was given which pacified *Vata* and *Pitta doshas*. After *Tarpana*, *Putapaka* (topical application of extraction prepared out of plant drugs) with *Panchatikta dravyas* helped in restoring the strength to the eyes. Apart from *kriya kalpas*, a combination of some oral medicines is given to the patient. *Muktashukti bhasma* helped in maintaining eyesight by its pittashamaka property. *Saptamrit lauh* is *Tridosha prashamaka* (pacifies the tridosha), *Rasayana* (rejuvenative), *Rakta prasadana* (enhancing the quality of blood tissue and *Chakshushya* (good for eyesight). *Amalaki rasayan* is also *Rasayana* and *chakshushya*.

Giloy sat and *Yashada bhasma*, both are *pitta dosha shamaka aushadhi*, so used here to pacify pitta dosha. *Mahatriphaladi ghrit* and *Patoladi ghrita* are very useful in *Rakta dosha vikaras*, so given orally here, which enhanced the blood quality of the patient. These medicines helped in relieving three doshas, enhanced blood quality, and prolonged the retinal dystrophy by revitalizing the tissue. After the treatment, we found that there was a marked improvement in the vision of the patient which was judged by visual acuity tests. Before treatment patient was not able to perform his daily routine activity as his vision was 3/60 in the right eye and HMCF in the left eye, but now after treatment patient can manage his daily routine work during the day and even in the dim light. There are several factors on which effects of the treatment depend like age of the patient, duration of the disease, stage of the disease, etc. Any disease will be difficult to treat in old age or if the disease is in its late stage. In the early stage, it is easy to cure any disease. RP is an inherited disease in which vision gradually decreases with time as age advances. The patient was complaining of vision problems since 2015, so because the patient reported to the hospital as early as possible, treatment procedures could successfully reverse the vision loss.

CONCLUSION

After this case study, we concluded that Ayurvedic treatment is safe and effective to reduce subjective symptoms of Retinitis pigmentosa by improving the quality of life of the patients. Ayurvedic treatment helps to delay the degeneration of the retina in Retinitis pigmentosa patients as the chemical constituents and systematic procedures of certain therapies can cross the retinal barrier.

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