



ISSN 2456-3110

Vol 7 · Issue 6

July 2022

Journal of
**Ayurveda and Integrated
Medical Sciences**

www.jaims.in

JAIMS

An International Journal for Researches in Ayurveda and Allied Sciences



Maharshi Charaka
Ayurveda

Indexed

Management of Traumatic Optic Atrophy through Ayurveda - A Case Report

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ABSTRACT

Introduction: Optic nerve atrophy refers to the death of the retinal ganglion cell axons that comprise optic nerve, which can adversely affect the central vision, peripheral vision and colour vision. **Materials and Methods:** This is a case report of 35 years old gentle man who approached OPD of Vaidyaratnam Ayurveda College, Ollur with signs and symptoms of traumatic optic atrophy in right eye since 6 years and he was totally blind in left eye since his 10 years of age. He was treated with *Brumhana*, *Nadibalya* and *Rasyana* line of treatment which is mentioned in the classics. i.e., *Akshi Tarpana*, *Nasya*, *Chakshushya Vasthi*, *Taila Dhara* and *Shamanoushadhis*. **Result:** The subject had shown marked improvement subjectively and in diagnostic test also. **Discussion:** Unfortunately there is no treatment to reverse optic atrophy in conventional medicine; however, limiting further optic nerve damage is the goal. Here the Ayurvedic treatments are adopted to restore the vision loss occurred in traumatic optic atrophy.

Key words: Traumatic optic atrophy, Nasya, Akshitarpana, Chakshushya Vasthi, Case Report.

INTRODUCTION

Optic atrophy refers to degeneration of the optic nerve, which occurs as an end result of any pathologic process that damages axons in the anterior visual system, i.e., from retinal ganglion cells to the lateral geniculate body.^[1] It is a serious condition can cause problems with vision like central vision loss, peripheral vision loss and colour blindness.

It usually occurs in individuals between 10-50 years of age. The common causes of optic atrophy are hereditary, trauma, tumour, decreased blood supply, glaucoma, optic neuritis, multiple sclerosis, toxic and

nutritional optic neuropathies etc. Main symptoms of optic atrophy are blurred vision, loss of vision, usually of long duration, which initially started as a sudden loss of vision.^[2]

Optic atrophy may broadly be divided into primary and secondary. Primary optic atrophy results from degeneration of optic nerve fibers without any complicating process. Secondary optic atrophy is characterised by some evidences of past neuritis or papilledema. Ophthalmoscopic types of optic atrophy are Consecutive optic atrophy, Glaucomatous optic atrophy, Vascular atrophy, Post neuritic optic atrophy, Cavernous optic atrophy and Traumatic optic atrophy.^[3] Consecutive optic atrophy follows the posterior segment diseases of the eye as in the later stage of Retinitis Pigmentosa. Glaucomatous optic atrophy characterised by the very prominent cup. Vascular atrophy occurs due to the decreased blood supply to vessels. Cavernous optic atrophy is not associated with proliferation of neuroglial cells. Traumatic optic atrophy occurs due to mechanical trauma. In some cases there may not be any neuroradiological sign of avulsion, the optic nerve may be seen to be intact.^[4] The optic nerve head will appear

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Submission Date: 14/05/2022 Accepted Date: 23/06/2022

Access this article online

Quick Response Code



Website: www.jaims.in

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normal initially, but optic atrophy can be seen 3-6 weeks after the initial traumatic event.^[5]

In total optic atrophy the pupils are dilated and immobile to light and the patient is blind, when unilateral the consensual reaction to light is exaggerated.^[6] In partial optic atrophy central vision is depressed and there is concentric contraction of the field, with or without scotoma, relative or absolute, according to the cause. Main clinical features includes loss of vision, semi dilated pupil with very sluggish and absent direct light reflex, relative afferent pupillary defect, visual field loss.^[7] Ophthalmoscopic features of optic atrophy in general are pallor of optic disc and decrease the number of small blood vessels.

Once complete atrophy has set in, the vision cannot be recovered. No treatment is effective for optic atrophy,^[8] the prognosis depends on the possibility of controlling the causal factor. It may help to preserve the vision. Here comes the role of Ayurvedic treatment so as to improve the quality of life by improving the vision of patient. The subject was treated with *Brumhana*, *Nadibalya* and *Rasyana* line of treatment which is mentioned in the classics by considering the *Kala* or chronicity, *Prakruthi* and *Lakshana* of subject i.e., *Akshi Tarpana*, *Nasya*, *Chakshushya Vasthi*, *Taila Dhara* and *Shamanoushadhis*.

MATERIALS AND METHODS

CASE REPORT

A male aged years consulted Shalaky Tantra OPD of Vaidyarathnam Ayurveda College, Thakkattusery complaining of blurring of vision in right eye since 6 years.

History of present illness

The subject was approached Vaidyarathnam Ayurveda College OPD with complaints of blurring of vision in right eye associated. His vision was totally lost in left eye since childhood. Vision in the right eye was apparently normal before 6 years. On 2016 he met a road traffic accident and hospitalised for one and half months. After discharge he was advised to take rest for 3 months. During this rest period he noticed blurring of

vision in right eye for 5 mints duration. Gradually it increased and he was unable to do his daily activities correctly. He consulted an ophthalmologist and they diagnosed the condition as Traumatic Optic Atrophy. He took treatment from there, but there was no marked improvement. After 6 years of duration, he came to Shalaky Tantra OPD of Vaidyarathnam Ayurveda College and Hospital, Ollur for the same complaint.

Past history: History of motorbike accident before 6 years

Family history: Nothing significant.

Personal history

- Bowel: once a day
- Appetite: Good
- Micturition: 4-5times/day
- Sleep: sound

Ashtasthana Pareeksha

- *Nadi*: 76/min
- *Mutra*: 4-5times/day
- *Mala*: Regular
- *Jihwa*: *Aliptha*
- *Shabda*: *Prakrutha*
- *Sparsha*: *Anushna sheetha*
- *Druk*: *Vikrutha*
- *Akruthi*: *Krusha*

Vitals

- Pulse rate: 76/min
- Respiratory rate: 20/min
- Temp: 98.6°F
- BP: 114/70mm of Hg

Systemic examinations: All the systemic examinations revealed no abnormalities.

Ophthalmic examinations

Slit lamp examinations explained in Table no: 1

Table 1: Slit lamp examinations

Ocular Structures	Right Eye	Left Eye
Eye brow	No abnormalities detected	No abnormalities detected
Eye lashes	No abnormalities detected	No abnormalities detected
Eye lid	No abnormalities detected	No abnormalities detected
Conjunctiva	No abnormalities detected	No abnormalities detected
Sclera	No abnormalities detected	No abnormalities detected
Cornea	No abnormalities detected	No abnormalities detected
Anterior chamber	No abnormalities detected	No abnormalities detected
Pupil	Round, Regular, Semi dilated, Sluggish reactive.	Round, Regular, Sluggish reactive
Lens	No abnormalities detected	No abnormalities detected
IOP	Normal	Normal

Visual acuity explained in Table no: 2

While doing visual acuity he was unable to see as normal. But he can see from right side of right eye. Because of that he tilted his head while checking Visual Acuity.

Table 2: Visual acuity

Visual acuity	OD	OS
Distant vision	6/12(P)	PR (+) in right lateral and inferior quadrant
Pin Hole	6/12(P)	—
Near vision	N10	—

Confrontation test: Only nasal superior quadrant was possible in right eye.

Examination of fundus

Findings explained in table no. 3

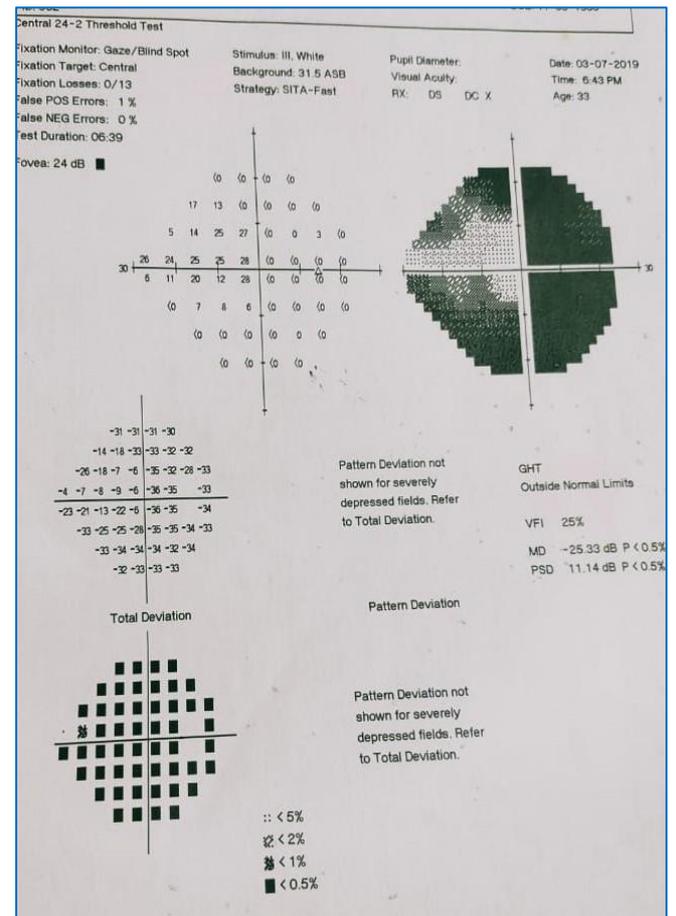
Table 3: Examination of fundus

On examination	Right eye
Media	Clear
Vessels	Thin
Macula	Greyish in colour
Foveal reflex	Absent
Optic disc	Pale, disc margins was blurred
Cup disc ratio	Cup disc margin was obliterated.

Investigations

Perimetry report of right eye is shown in figure no. 1

Figure 1: Perimetry report of right eye before treatment



Diagnosis: Traumatic optic atrophy

Treatment

1. *Ama Pachana* with *Vaishwanara Churna* 1 tsp at night for 3 days
2. *Nasya* with *Jeevanthyadi Ghrutha*^[9] 6 drops in each nostrils.
3. *Tarpana* with *Jeevanthayadi Ghrutha* for 5 days
4. *Chakshushya Vasthi*^[10] in the mode of *Yoga Vasthi*
5. *Annalepa* over eyes for 7 days
6. *Shirodhara* with *Ksheerabala*^[11] for 14 days

Internal medicines

1. *Vidaryadi Kashayam*^[12] 15ml BD with 60ml luke warm water before food.
2. *Balarishtam* and *Ashwagandharishtam* 25ml after food at after noon and night.
3. *Sapthamrutha Louha*^[13] 2 tablet at night with honey and ghee after food.
4. *Ksheerabala* soft gel cap 1 BD with *Kashaya*
5. *Thriphala Ghrutha*^[14] 1tsp at night

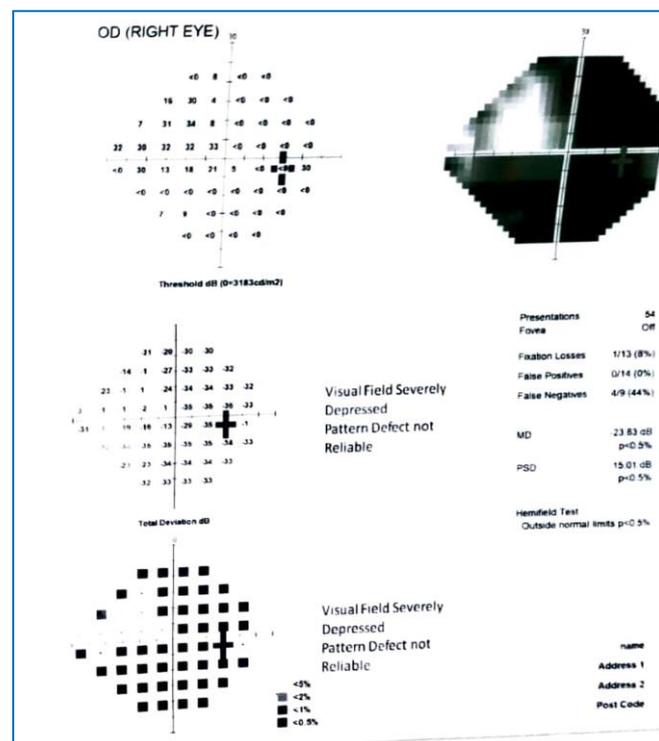
RESULTS

Total treatment duration was 38 days, subject showed improvement both subjectively and objectively. Before and after treatment Perimetry results of right eye are shown in figure no 1 and 2 respectively. Before and after treatment Visual acuity results are shown in table no. 2 and 3 respectively.

Table 3: Visual acuity after treatment

Visual acuity	OD	OS
Distant vision	6/12	PR (+) (subjective improvement)
Near vision	N10	—

Figure 2: Perimetry result of right eye after treatment



DISCUSSION

The present case was traumatic optic atrophy of right eye. The aim of treatment was to rejuvenate the damaged nerve fibres with *Nadibalya*, *Brumhana* and *Rasayana* line of treatment.

Mode of action of treatments

Amapachana was attained by giving *Vaishwanara Churna*. After that *Brumhana Nasya* was planned. Because the optic nerves got atrophic and degenerative changes due to trauma. To nourish the nerves the only way is *Brumhana*. *Brumhana Nasya* is indicated in *Vataja Shoola*, *Nasa Shosha* etc. conditions. In the present case also *Shosha* of optic nerves causes blurring of vision. And the medicine used for *Nasya* is *Jeevanthyadi Ghrutha*. It contains drugs like *Jeevanthi*, *Prapoundareeka*, *Kakaoli*, *Sitha*, *Ksheera*, *Madhuka*, *Draksha*, *Ghrutha* which are having *Vathahara* and *Brumhana* action. It contains *Thriphala* and *Pippali*. Both are having *Rasayana karma* and *Triphala* is considered as a *Chakshushya Dravya*. Thus, it helps to repair and nourish the damaged nerves.

Tarpana with *Jeevanthyadi Ghrutha* was adopted for 5 days. By doing *Tarpana*, fat soluble contents of drug

absorbs through the cornea and it transports through the deeper tissues. Lipid contents of this *Ghrutha* helps in anaerobic oxidation which prevents from oxidative injuries and amino acids and protein contents provides strength to the nerves.^[15] Thus *Balya*, *Rasayana* and *Chakshushya Karma* of *Ghrutha* restore the blurred vision in the atrophic condition.

Chakshushya Vasthi was done in the mode of *Yoga Vasthi*. *Anuvasana Vasthi* was given with *Thriphala Ghrutham* and *Asthapana Vasthi* was given with *Eranda Moola Kashayam*. *Thriphala Ghrutha* is indicated in *Timira* and it is considered as *Chakshushya*, *Rasayana* and *Tridosahara*. In *Kashaya Vasthi*, *Yashti Kalaka* and *Taila* are used which is *Netrya*, *Brumhana* and *Vatahara*. Thereby this *Vasthi* helps in rejuvenating the damaged nerves.

Annalepa was done only around the eyes with *Shahstikashali* and *Ksheera*. It gives strength and nourishment to the structures of eye. *Shirodhara* with *Ksheerabala* was selected. *Ksheerabala* can act as *Vatapithahara*, *Nadi Balya*, *Brumhana*. *Ksheerabala Dhara* can cross the blood retinal Barrier and act as nerve tonic.

Vidaraydi Kashayam contains *Vidari*, *Jeevathi*, *Jeevaka*, *Rishabhaka*, *Bruhati*, *Sariva*, *Gokshura* etc. drugs which are having *Vatapithahara* and *Brumhana* in *Karma*. *Ashwagandharishta* and *Balarishta* relieves *Vata* and gives strength to nerves. *Sapthamrutha Loha* contains *Ghrutha*, *Thriphala* and *Madhuka*. They are *Netrya*, *Pithanilahara* and *Bhrumhana*. Since, it is indicated for *Timira*, it helps to reduce the blurring of vision present in the optic atrophy.

CONCLUSION

In the present study of traumatic optic atrophy the blurriness occurs according to the damage or degeneration of nerves. So, in this condition there is a need of *Nadibalya*, *Brumhana* and *Rasayana Chikitsa*. The mentioned three line of treatments are adopted in the different modalities for improving the vision by repairing the atrophied nerves.

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How to cite this article: Premcy C R. Management of Traumatic Optic Atrophy through Ayurveda - A Case Report. J Ayurveda Integr Med Sci 2022;6:213-218.

Source of Support: Nil, **Conflict of Interest:** None declared.
