



CASE REPORT

A CASE REPORT ON AYURVEDIC MANAGEMENT OF ACQUIRED OCULOMOTOR PALSY

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Abstract

Acquired oculomotor palsy is an ocular pathology resulting from damage to the third cranial nerve or its branches. Causes of this include head trauma, space-occupying lesions (neoplasms and aneurysms), and vascular lesions. The annual incidence was higher in older patients (aged greater than 60 years) compared to younger patients and in those with prominent or long-standing atherosclerotic risk factors, such as diabetes or hypertension. As per Ayurvedic classics, the diseases affecting neuro-ophthalmology can't be correlated entirely with any disease entity. Some of the symptoms comes under *Anyathovatam*, *Vataparyayam* and *Vatahatam*. The neuro-ophthalmologic disorders are mainly due to the vitiation of *Vata dosa*, either *Dathu kshaya* or *Avarana*, so the treatment mainly focus to maintain the normalcy of *Vata dosa* and can be adopted according to the pathogenesis and involvement of other doshas.

This case report discussed a 66 year old male patient consulted to the outpatient department, Govt. Ayurveda college, Thiruvananthapuram with unilateral complete ptosis, pain over right eye, right side of forehead and double vision since 2 weeks. The case was managed effectively with ayurvedic medications along with frequent *Jalouka avacharana*. After the treatment he got considerable relief; thus this study proves that ayurvedic management is effective to manage some of the neurological diseases.

Introduction

The oculomotor (third cranial) nerve is entirely motor in function. It supplies all the extraocular muscles except the lateral rectus and superior oblique. It also supplies the sphincter pupillae and the ciliary muscles. The functional components are somatic efferent component, is concerned with the movements of eye ball. The general visceral efferent (para-sympathetic) component of the nerve is meant for accommodation and contraction of the pupil, and the general somatic afferent component of the nerve is associated with proprioceptive impulses from the extra ocular muscles¹. The third cranial nerve has both somatic and autonomic fibers. Somatic (voluntary) nerve fibers are bundled deep inside the nerve, while the autonomic (involuntary)

fibers surround the somatic fibers around the outside of the nerve. Knowing the spatial layout of these fibers will help one understand the various forms of presentation in third nerve palsies. The causes of oculomotor nerve palsy includes head trauma, space-occupying lesions (neoplasms and aneurysms), and vascular lesions². Sudden onset of painful or painless oculomotor palsy with spared pupil in the middle aged or elderly patient having diabetes, hypertension, or both is almost always suggestive of a microvascular etiology. Estimation of blood sugar and ESR may be indicated in the initial evaluation. Complete resolution of the palsy is expected 2-3 months after onset. Pupil sparing oculomotor palsy in younger patients without obvious etiology should be fully evaluated. Sudden onset of painful third nerve palsy with pupillary involvement at any age is an indication for carotid angiography to exclude posterior communicating artery aneurysm. Chronic third nerve palsies regardless of pupil involvement suggest the need for imaging studies to exclude a mass along the course of the peripheral nerve³. An acquired third nerve palsy may resolve, depending on the cause. Non-steroidal anti-inflammatory agents often are used to manage pain in these clinical situations. Surgical removal of the tumour or blood vessel compressing the third nerve may cause relief from symptoms⁴.

Aims and Objectives

- ♦ To study the efficacy of Ayurvedic management in acquired oculomotor palsy.

Materials And Methods

A 66 year old male patient with acquired oculomotor palsy was selected from Outpatient Department of *Shalakyatantra*, Govt Ayurveda College, Thiruvananthapuram, Kerala, India.

Case Study

A 66 year old man with known case of Diabetes mellitus consulted in *Shalakyatantra* OPD on 22/07/2022, presented with sudden drooping of his right eyelid along with pain over right eye, right side of forehead and double vision since 2 weeks.

Chief Complaints and Associated Symptoms

Inability to open the right eye along with pain over right eye, right side of forehead and double vision while force fully opening the right eye.



BEFORE TREATMENT- Case presentation

History of Present Illness

A 66 year old male patient resident of Thiruvananthapuram Kerala, business man by occupation and a known case of Diabetes Mellitus for the past 10 years, not under proper medication, came to the OPD with the complaints of sudden drooping of his right eyelid along with mild aching pain over right eye, right side of forehead, double vision while force fully opening the right eye. As usual, 2 weeks back one day while waking up he cannot open his right eyelid, along with dull aching pain. At first he consulted an allopathic hospital, took MR angiography and MR imaging of brain which was normal, was diagnosed with third nerve palsy as a complication of Diabetes. He was advised with oral tablets and insulin injection (15 IU at evening). Not given any ophthalmic treatment specifically, so he came to Government Ayurveda college Thiruvananthapuram for the further treatment option.

On orbital and adnexal examination, the patient has complete ptosis right eye and there was exotropia with hypotropia on forceful opening of right eye and the findings suggestive of third nerve palsy in the right eye with spared pupil. The patient is having bilateral immature senile cataract (right eye > left eye). On direct pupillary examination sluggish reaction was noted in both eyes. The patient's visual acuity was 6/24(+1) in Right eye(RE) and 6/18(+1) in Left eye(LE). His best corrected visual acuity (BCVA) was 6/12 on RE and 6/6 on LE. Intraocular Pressure was within normal range. Fundus examination showed mild Non proliferative Diabetic Retinopathy changes in both eyes. The remaining cranial nerves were intact and there was no evidence of sensory or motor weakness.

General Examination

- ♦ Weight – 62 kg
- ♦ Height – 165 cm
- ♦ Heart rate – 78/min
- ♦ Pulse rate- 78 /min

Personal History

- ◆ Diet – mixed (mostly non veg)
- ◆ Appetite – good
- ◆ Bowel – constipated
- ◆ Micturition – normal
- ◆ Sleep - disturbed

Family History

- ◆ No relevant family history

Investigations

- ◆ Total cholesterol - 222mg%
- ◆ PPBS – 212mg%
- ◆ ESR- 132 mm/hr

Differential Diagnosis

- ◆ *Vata hatam*- Drooping of upper eyelid⁵
- ◆ *Anyatovatam*-Causes pain in *Manya*, *Akshi*, and *Sankha* regions (*Vagbhata*)⁶. Pain felt at *Karna*, *Manya*, *Hanu*, *Greeva*, *Netra* and *Bhru* regions (*susruta*)

- ◆ *Vataparyayam*- in addition to *Anyathovata*, structurellay deviated eyeball is mentioned as a feature (*Susrutha*)⁷

All these conditions share symptomatic similarities with oculomotor nerve palsy. In *Vatahatam* only drooping of eyelid is mentioned. In case of *Anyatovatam* pain will manifest over *Karna*, *Greeva*, and *Hanu* regions. Apart from this, *Vataparyaya* encompasses features related to eye along with structural changes.

Hence the clinical features of third nerve palsy such as pain in and around the eyes, with deviated eye ball are closely related with *Vataparyayam* in ayurvedic classics, and treatment started accordingly.

Diagnosis

- ◆ *Vataparyayam*

Treatment principle adopted

- ◆ *Vata kapha hara and Rakta prasadaka chikitsa* in the initial stage and *Kevala vata chikitsa* afterwards.

TREATMENTS GIVEN

A. INTERNAL MEDICINES

Date	Internal medicine	Dose	Duration
22/07/22to 25/07/22	<i>Punarnavadi kashayam</i>	90ml twice daily before food (6 am and 6 pm)	4 days
27/07/22 to 28/08/22	<i>Kaisora guggulu</i>	2 tablets twice daily after food	31 days
	<i>Chandraprabha tab</i>	2 tablets twice daily after food	
	<i>Nishakathakadi kashayam</i>	frequent oral administration	
22/07/22to 25/07/22	<i>Dhanwantharam grtham</i>	1 tsp at bed time	4 days
3/08/22 to 9/0822			7 days

B. PROCEDURES

Date and duration	Treatment	Medicine	Dose and time	Duration
22/07/22 to 25/07/22 (1-4 Days)	Sekam Mukha leepam	Lodra and darvi kasayam Lodra and darvi choornam with vara kashayam	Twice daily Twice daily	4 Days 4 Days
23/07/22 to 25/07/22 (2-4 Days)	Jaloukaavacharanam	Right forehead and right lateral canthus		3 Days
26/07/22 (5 th Day)	Virechanama	Avipathy choornam	20 gms with hot water 6 am	1 Day
27/07/22 to 02/08/22 (6-12 Days)	Marsha nasyam	Varanadi ksheera grtham Mukha abhyangam with bala thailam Thalam with rasna jambeeram	20 drops each nostrils	7 Days
03/08/22 to 09/08/22 (13-19 Days)	Sirodhara Prathi marsha nasyam Jaloukaavacharanam	Balaguluchyadi keram Varanadi ksheera grtham	Morning 45 minutes 5 drops each nostrils Right forehead and right lateral canthus (alternative days) 1 st day 60ml then rest of the days 90ml	7 Days 7 days 4 days 7 Days
10/08/22 to 16/08/22 (20-26 Days)	Matra vasthi Prathi marsha nasyam jaloukaavacharanam	Dhanwantharam mezku pakam	5 drops each nostrils Right forehead and right lateral canthus (alternative days)	7 Days 7 Days 3 Days
17/08/22 to 21/08/22 (27-31 Days)	Tharpanam	Jeevaneeya gana grtham	Morning 10 minutes	5 Days
22/08/22 (32 nd Day)	Putapakam	Jeevaneeya gana ajamamsa putapaka rasam	Morning 6 minutes	1 Day

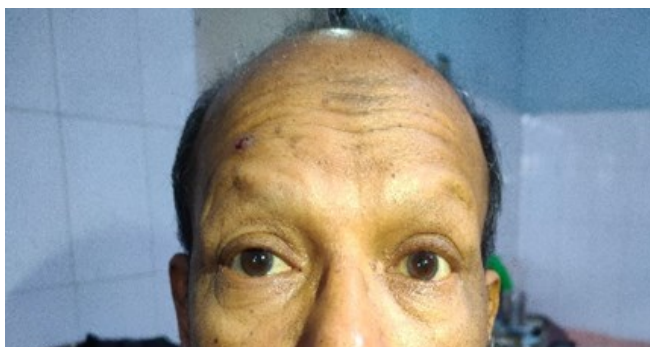
AFTER TREATMENT

Total duration of treatment was 32 days.

Follow up was done monthly once for 2 months

Observation & Result

Pain was relieved after *seka*, and *virechana*. The procedures of *raktamoksha nasya*, *sirodhara*, *matra vasti* and external application of oil resulted in complete reversal of the drooping of eyelid along with improvement of ocular movements. The patient got complete relief after the treatment procedure.



FEATURES	BEFORE TREATMENT	AFTER TREATMENT
Ptosis	Complete	Nil
Ocular movements	Restricted Elevation, Adduction, Depression	Complete movements possible
Pain	++	Nil

Ethical consideration

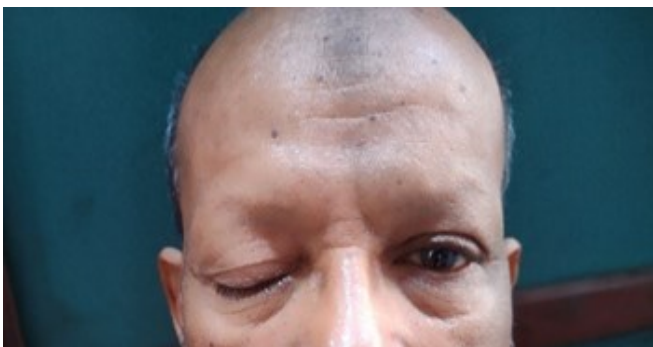
Informed consent of the patient was taken.

Discussion

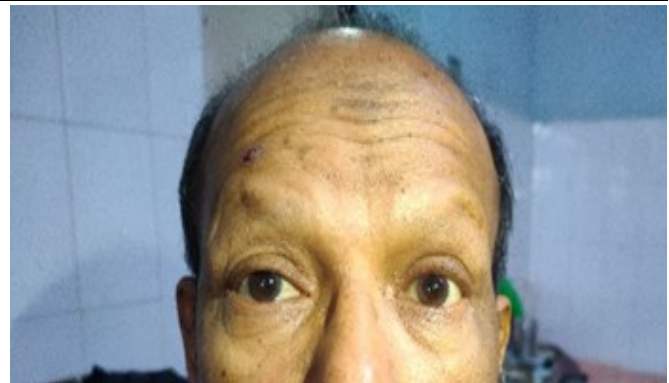
The *dosas*, *dhatu*s and *srotas* were involved can be assessed from the presentation of disease. Here, the associated doshas are *Prana* and *vyana* *vayu*, *Rasa-Rakta dhatu*s and *Upadhatus* like *Snayu*, *Sira* and *Kandara*. The main pathology occurring here is *Vatavaigunya* (*Vyana*) due to *Srotorodha* in *Rasa-raktavaha dhamanis* leading to *srotho vaigunya*. So the treatment modality should be aimed to get rid of *srotosanga* which will bring *vatanulomana*; and strengthens the patient by *brimhana* and *balya* procedures and medications.

Seka were done to reduce the pain along with *mukhalepa* were started to improve the visual acuity. *Dhanwantara Ghrita* was selected for *Snehapana*, because it has the properties for correction of *Dosas* as well as the underlying disease *Prameha*. *Avipathy churna* was selected for *Virechana* as it has *apana* *vayu anulomana* properties, if *apanavayu* get corrected then other *vayus* also get normalcy. *Raktamoksha* was done for *dooshya nirharana*.

In this case patient got much relief by using *Jalouk Avacharana*. Importance of leech therapy is that it has direct effect on ischemia/reperfusion injuries because the saliva of medical leeches contains anti-inflammatory agents, such as hirudin, hirustasin etc. Therefore, hirudotherapy can be an effective treatment for reducing ischemia-reperfusion injuries⁸. *Matra Vasti*, *Tarpana* and, *Putapaka* were done on both eyes for *balya* and *rasayan*.



BEFORE TREATMENT (22/07/22)



AFTER TREATMENT(22/08/22)

Conclusion

As per Ayurvedic classics, the diseases affecting neuro-ophthalmology can't be correlated entirely with any disease entity. The neuro-ophthalmologic disorders are mainly due to the vitiation of *Vata* *dosa*, either *Dathu kshaya* or *Avarana*, so the treatment focuses to maintain the normalcy of *Vata* *dosa* and can be adopted according to the pathogenesis and involvement of other *doshas*. Here the treatment principles adopted was *vatabhishyantha chikitsa*. Proper *srotoshodhana*, *Dosa Shamana*, and *Brimhana* therapies had shown significant improvement in relieving the condition.

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