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ACQUIRED OCULOMOTOR PALSY: A CASE STUDY

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ABSTRACT

Acquired Oculomotor nerve palsy (OMP) is an ocular pathology resulting from damage to third cranial nerve which is frequently seen in old age group and in those with prominent or long-standing atherosclerotic risk factors, such as diabetes or hypertension. Though the disease entity can't be correlated entirely with any Ayurvedic disease entity, treatment can be adopted according to the pathogenesis and involved *doshas*. A 44 year old male patient, diagnosed with Neurogenic Ptosis and ophthalmoplegia due to acquired Third nerve palsy was treated at *Shalakyatantra* Inpatient Department of Govt. Ayurveda College, Trivandrum. The patient presented with pain over left eye & Left side of forehead with drooping of left upper lid and double vision since 2 months. He was treated according to the line of management of *Nimesha*, *Ardita* and *Vatabhishyanda*. The treatment included internal medications like *Chandraprabha vati*, *Punarnavadi Kashaya* and external medications like *Bidalaka*, *Shirovasti*, *Shashtika pindasweda* etc. The treatment was intended to bring *Srotoshodhana*, *Doshanulomana* and *Dhatuposhana*. There was complete relief of symptoms after treatment for 45 days.

KEYWORDS: Acquired Oculomotor nerve palsy, *Ardita*, *Bidalaka*, Neurogenic Ptosis, ophthalmoplegia, *Shashtika pindasweda*.

INTRODUCTION

Acquired Oculomotor nerve palsy (OMP) is an ocular pathology resulting from damage to third cranial nerve. It is most frequent in persons older than 60 years and in those with prominent or long-standing atherosclerotic risk factors, such as diabetes or hypertension.[1,2] Clinical presentation may vary according to the affected area of the nerve tract resulting in complete or partial functional defects of extra ocular muscles – superior Rectus, Inferior

Rectus, Medial Rectus and Inferior Oblique; lid muscle – Levator Palpebrae superioris and autonomic muscles – Sphincter Pupillae and Ciliary muscles.[3] Patients may present with any combination of ptosis, ophthalmoplegia, diplopia, and a poorly-reactive dilated pupil. Pupil-sparing palsy is commonly due to ischemic injury in patients with vascular risk factors such as hypertension or diabetes. The mechanism of this type of palsy is not well delineated, but pathological studies have revealed arteriolar thickening and demyelinating lesions consistent with micro vascular ischemia of the nerve.[4,5] Pupil involving 3rd Nerve palsies should be attributed to compression from a posterior communicating artery aneurysm until proven otherwise, and as such, they warrant urgent investigation with computed tomography angiography (CTA) or magnetic resonance angiography (MRA). Typically, the signs of medical third nerve palsy will slowly improve in weeks to months, so surgery should only be considered when the spontaneous improvement of ptosis and ocular motility are unsatisfactory after six months.

CASE STUDY

A 44 year old male patient came to the OPD of Govt. Ayurveda College, Trivandrum (on 12.07.12) with complaints of Pain over left eye & Left side of forehead with drooping of left upper lid and double vision since 2 months.

History of Present Illness: The patient was a known diabetic since 8 yrs. He had sudden pulsatile & throbbing pain over Left forehead & eye (10.05.2012) which gradually became severe along with slight weakness of Left upper lid. Within 1 week he felt gradual drooping of Left upper eyelid associated with tenderness and double vision while viewing with both eyes together. Within 2 days, his Left eyelid became completely drooped & after that diplopia disappeared. On forceful opening of Left eye he felt double vision along with pain over that eye. He consulted Regional Institute of Ophthalmology, Trivandrum where he was diagnosed as neurogenic ptosis due to 3rd Nerve Palsy as a complication of Diabetes and was advised to undertake medicines. The patient was not satisfied with the treatment and after 2 months of medications, he decided to undergo Ayurvedic treatment.

Drug History: The patient was on Injection Insulin (10 units in morning and 8 units in evening).

Personal History: He had good appetite with normal bowel functions but reduced sleep. His Higher Mental functions were normal.

Examination findings: Cranial nerve examination showed total palsy of Oculomotor Nerve with pupillary involvement. Occular examination revealed complete Ptosis of Left upper lid with restricted elevation, adduction and depression of left eyeball and a round, mid dilated and fixed pupil. His BCVA was 6/6 Right eye and 6/12 left eye. Intraocular Pressure was within normal range. Fundus exam showed mild Non proliferative Diabetic Retinopathy changes in both eyes. CT Brain Angiography was Normal with no e/o aneurysms.

Treatment Adopted: Since no specific treatment was mentioned as such for this disease entity in Classics, *Vatashamana* treatment mentioned for *Nimesha* in Chakradatta, *Ardita* and *Vatabhishyanda* was adopted.

Procedure	**Medicines used**	**Dose and Duration**
Bidalaka	*Mukkadi Yoga*	Twice daily for 3 days
Seka	*Triphala Kashaya*	Twice daily for 3 days
Mukhalepa	*Triphala Yashti choorna*	30 mins for 7 days.
Thalam	*Rasnadi Choorna+Dhanwanthara Taila -7 Avarata*	30 mins once in the morning
Lid massage	*Dhanwanthara Taila -7 Avarata*	Twice daily for 5 days
Mild fomentation by *Koshna Seka*	*Koshna erandamoola* and *Bala Ksheera seka*	Twice daily 5 days
Vicharana snehapana	Dhanwanthara ghrita	10g daily with 5g Triphala choorna 7 days
Jalookavacharana	Over the forehead and lateral canthus	1 day
Virechana	Gandharveranda Taila	30ml with milk for 1 day
Marsha nasya	Dhanwanthara Taila -7 Avarata	15drops for 7 days
Shirovasti	Dhanwantara Taila	7 days in the morning
Pratimarsha nasya	Dhanwantara Taila -7 Avarata	In evening
Pindasweda	Shashtika Pinda	Over left eyelids bd 7 days
Jalookavacharana	Over the forehead and lateral canthus	3 sittings
Tarpana	Jeevaneeya gana gritha	5 days

Internal medications

Chandraprabha Vati 2 tablets twice daily after food

Pathyashadanga Kashaya 45ml in the evening before food

Punarnaviadi Kashaya 45 ml in the morning before food

Dhanwanthara ghrita 10g with *Triphala choorna* 5g at night

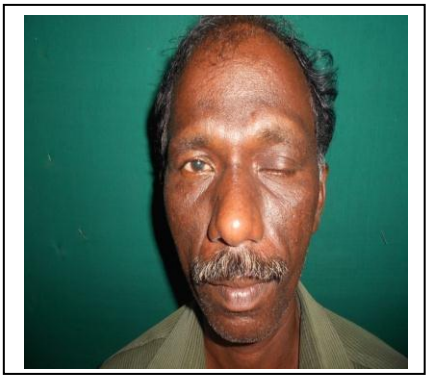
Total duration of treatment was 45 days.

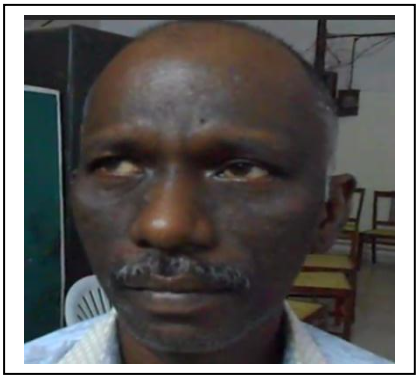
Follow up was done monthly once for 2 months.

RESULTS

Left Ptosis, downward and outward deviated left eyeball due to 3rd N palsy(Dilated Rt pupil due to mydriatics).

After treatment, resolved Ptosis With normal eyeball movement





Pain was relieved after the procedure of *Bidalaka* and *Seka*. After *raktamokshana* and *Virechana*, there was response in pupillary reactions. After the procedure of *Nasya* and *Shirovasti*, partial improvement was seen in ocular movements. After *Shashtikapindasweda*, drooping was completely reversed. Best corrected Visual acuity became 6/6 (B.E.) after the 3rd sitting of *Jalookavacharana*. After complete treatment procedure, the patient became completely relieved of his complaints.

Features (Left eye)	**BT (Left eye)**	**After *Virechana* (Left eye)**	**After *Sirovasti* (Left eye)**	**After Shashtika pindasweda (Left eye)**
Ptosis	11mm	4mm	1mm	Nil
Pupil size	9mm	5mm	3mm	3mm
Pupillary reaction	Non reactive	Brisk, but constriction not well maintained	Normal	Normal
Ocular movements	Restricted elevation, adduction, depression.	Restricted movements	Moderate improvement	Full movements possible
BCVA	6/12	-	6/9	6/9

DISCUSSION

From the presentation of disease, general information about the involved *dosa*, *dhatus* and *srotas* involved can be inferred. Here, the involved *doshas* are *Prana*, *Udana* and *vyana vayu*, *Rasa-Rakta dhatus* and *Upadhatus* like *Snayu*, *Sira* and *Kandara*. The main pathology occurring here is *Vatavaigunya (Vyana)* due to *Srotorodha* in *Rasa-raktavaha dhamanis* leading to *Nadi vaigunya* and *Nimeshini sira vaigunya*. So the treatment modality should be aimed to remove *srotosanga* which will bring *vatanulomana;* and then strengthen the involved muscles by *brimhana* and *balya* procedures and medications. *Bidalaka* and *Seka* were intended to pacify the pain. Later *Mukhalepa* was started to improve the Visual acuity,

as it is *Chakshushya* procedure. *Dhanwantara Ghrita* and *Taila* were selected for *Snehana*, since it has the properties for correction of *Doshas* as well as the underlying disease *Prameha*. Moreover it also has the property of nourishing and strengthening the involved organs. *Thalam* was selected in the initial stage as a variant of *Moordhataila* and the selected drugs were having vatashamana and anti-inflammatory properties. *Raktamoksha* was done after *snehana* for *dooshya nirharana*. *Gandharverandataila* was selected for *Virechana* as it has best *Vatanulomana* properties. After bringing the *dosha* into normalcy, *Nasya*, *Moordhataila* and *Tarpana* were selected for the purpose of providing nourishment to the involved structures which are also mentioned in the treatment of similar disease conditions viz. *Nimesha* and *Ardita*. *Shashtikapinda sweda* is both *brimhana* and *Vatashamana* and will act locally to strengthen the lid and extraocular muscles.

CONCLUSION

Oculomotor Nerve palsy as such cannot be co related to any disease entity mentioned in Ayurvedic classics. But treatment modality which can break the pathophysiology of the disease can be adopted on a logical basis. Here the treatment modality adopted was of *Ardita*, which manifests due to seventh nerve palsy and of Vata abhishyanda; a degenerative eye disorder due to inflammatory changes occurring in vascular channels of the eye. Proper *Dosa Shamana, srotoshodhana and Brimhana* therapies had shown significant improvement in relieving the condition.

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