

MANAGEMENT OF OCULAR NEUROMUSCULAR DISEASES THROUGH AYURVEDA  
W.S.R TO RECTUS MUSCLE PALSYDr. Nikhita Revankar\*<sup>1</sup> and Dr. Sharanprasad Kolliyar<sup>2</sup><sup>1</sup>P.G. Scholar, Dept. of Shalakyta Tantra, Shri Dharmasthala Manjunatheshwara Institute of Ayurveda and Hospital, Bangalore.<sup>2</sup>Associate Professor, Dept. of Shalakyta Tantra, Shri Dharmasthala Manjunatheshwara Institute of Ayurveda and Hospital, Bangalore.

\*Corresponding Author: Dr. Nikhita Revankar

P.G. Scholar, Dept. of Shalakyta Tantra, Shri Dharmasthala Manjunatheshwara Institute of Ayurveda and Hospital, Bangalore.

Article Received on 16/12/2023

Article Revised on 05/01/2024

Article Accepted on 26/01/2024

## ABSTRACT

Movement of eye is controlled by 3<sup>rd</sup>, 4<sup>th</sup>, 6<sup>th</sup> cranial nerve which supplies extraocular muscles among which 6<sup>th</sup> cranial nerve (Abducent nerve) supplies lateral rectus muscle of eye which helps in abduction of eye by contraction of lateral rectus muscle. Any malfunction of sixth cranial nerve causes inability of eye to turn outward which results in convergent strabismus leading to Diplopia. Most commonly seen in adults and second most common in children. In contemporary science this condition is managed by patching of affected eye or by using spectacles. As per classics, Diplopia can be taken as *Dwitiya patalagata Timira* according to *Acharya Vagbhata*, where as *Acharya Sushruta* has considered under *Tritiya patalagata Timira*. A 16 year old female patient came to our OPD with complaints of double vision and difficulty in turning left eye away from nose which is of sudden onset associated with headache since 2 months. She approached to modern hospital and advised steroids, as patient has not found any results came to our hospital for ayurvedic treatment.

**KEYWORDS:** Rectus muscle palsy, Diplopia, Ayurveda, *Timira*.

## INTRODUCTION

The lateral rectus muscle is one among the six eye muscles that control eye movement, mainly helps in abduction that is outward movement of eye, keeping the eye in the center away from the nose toward the temporal side. **Lateral rectus palsy**, **Sixth nerve palsy**, or **abducens nerve palsy** arises from an acquired lesion occurring anywhere along its path between the sixth nucleus in the dorsal pons and the lateral rectus muscle within the orbit, due to poor blood supply, head injury, direct pressure on nerve due to tumour or swelling of neighbouring vessels, inflammation of region of nerve causing restricted movement of eye from centre to laterally, inward movement of eye when looking straight, convergent strabismus leading to diplopia.

As per classics, diplopia is told under *Dwitiya patalagata Timira* by *Acharya Vagbhata*<sup>[1]</sup>, where as *Acharya Sushruta* has included under *Tritiya patalagata Timira*.<sup>[2]</sup>

## CASE REPORT

A 16 year old female patient was apparently normal 2 months before she gradually presented with blurriness of vision for 2 days followed by double vision and restricted movement that is unable to move left eye from centre to laterally on December 24<sup>th</sup> 2022 which is without spectacles at first and gradually developed with specs also, with these complaints patient went to Modern hospital where they were prescribed with steroids which was taken for 1 month, has not shown much results so for further management patient visited our hospital on 24/2/23. The patient had no family history.

Table 1: Visual acuity.

	Both eye	Right eye	Left eye
With specs	-	6/6 p	4/60
Distant vision	-	5/60	4/60
Pin hole	-	6/9p	6/18
Near vision(with specs)	N6	-	-
Near vision(without specs)	N24	-	-

**Table 2: Examination of Eye.**

	OD	OS
Eye lashes	Normal	Normal
Eye lids	Normal	Normal
Conjunctiva	Normal	Normal
Cornea	Clear	Clear
Pupil	RRR	RRR
Lens	Normal	Normal
EOM motility	Normal	Difficulty to abduct left eye
Fundoscopic Examination	Normal foveal counter	Normal foveal counter

**Ocular examination**

**Head Posture**

- Face turned to left side.
- No facial asymmetry

**Ocular Posture**

Hirschburg’s Corneal Reflex Test: Light reflex appeared outwardly deviated from the centre of the pupil.

- 21 degree esotropia.

**Cover test**

**a) With distant Target**

- On covering right eye there was inward movement of left eye (LE Esotropia).

**b) With Near Target**

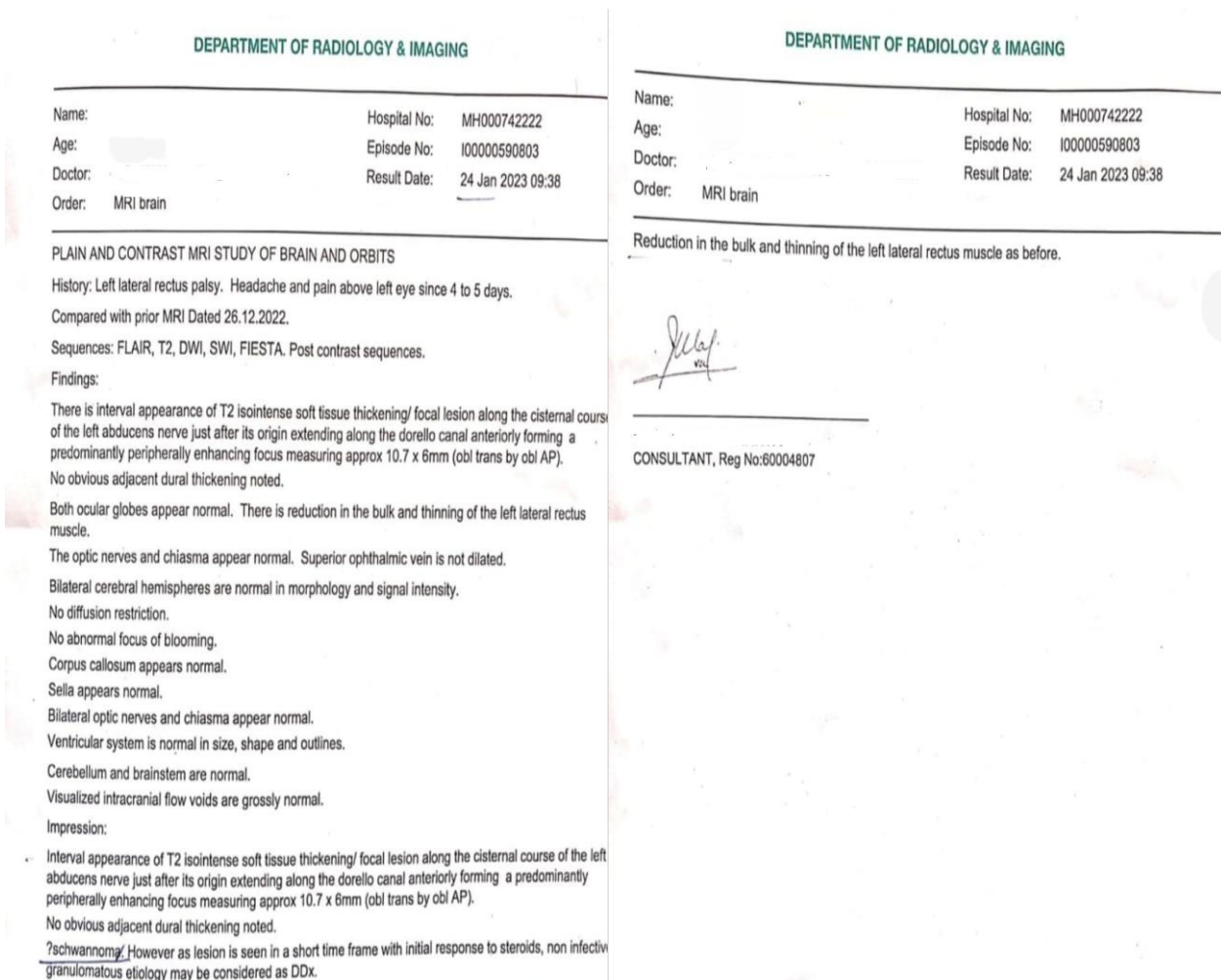
- Left eye esodeviation was more for distant than for near fixation.

**Uncover Test**

- RE : Inward movement of left eye
- LE: No movement

**Alternate Cover Test**

- LE constant esotropia.



**Picture 1: MRI Report.**

**Table 3: Treatment given.**

First sitting Treatment (8/3/23 to 19/3/23)	Second sitting Treatment (1/4/23 to 9/4/23)	Duration
Virechana-Gandharvahastadi eranda taila 25ml+ Triphala kashaya 20ml	-	1day
Nasya - Ksheera bala 101 10/10 drops	Nasya - Ksheera bala 101 10/10 drops	7days
Seka -Yastimadhu ksheerapaka	Seka -Yastimadhu ksheerapaka	7days
Tarpana with Jeevantyadi Ghrita + Patoladi Ghrita	Tarpana with Jeevantyadi Ghrita + Patoladi Ghrita	7days
Annalepa to netra with Shastikashlai +Madhuyasti churna +Saindhava lavana +Kshera bala 101	Annalepa to netra with Shastikashlai +Madhuyasti churna +Saindhava lavana +Kshera bala 101	7days
Pindi- Vasa, Guduchi, Shigru, Kumari	Pindi- Vasa, Guduchi, Shigru, Kumari	7days
Basti –Rajayapana basti	Basti –Rajayapana basti	8days
-	Sarvanga Abhyanga with Ashwaghanda bala lakshadi taila +Bhashapa sweda	7days
-	Shirodhara with Ksheera bala taila	7days
-	Putapaka	3days

**Orally**

- Sukumara rasa 1-0-1 BF
- Ashwaghanda capsule 2-0-2 AF
- Balaguduchyadi kashaya 3tsf TIDBF
- Balamoola Capsule 2-0-2 AF
- Yastimadhu Capsule 2-0-2 AF

**Picture 2: Before treatment.****Picture 3: After treatment.****RESULTS**

There was significant improvement in movement of eye after first sitting though diplopia was still persisting, after second sitting patient can move her eyes in all gazes and patient could appreciate reduction in diplopia.

**DISCUSSION**

Sixth nerve palsy is a nerve disorder. Sixth cranial nerve sends signals from brain to lateral rectus muscle. When this isn't working properly, it causes problems with the

movement of your eye. These functions are governed by *Vata*, hence the improvement can be expected by attaining the normalcy of *Vata*. So in this case *vatahara* line of treatment is adapted.

*Virechana* cleanses the Gastro Intestinal tract thoroughly and voids off the toxins and helps for better absorption of medicine, *Gandharvahastadi eranda taila* is one of the *snigdha virechana dravya*<sup>[3]</sup> which is indicated in all types of *Vataja vikaras*.

*Nasya*<sup>[4]</sup> with *Ksheera bala 101* strengthens and nourishes the nerves which obstruction of vitiated *Vata Dosha* in the *Murdha* also helps to improve blood circulation to related areas of the brain.

*Seka*<sup>[5]</sup> with *Yastimadhu ksheera paka* is helpful in *pittavikaras* to increase circulation and also gives nourishment to the underlying structures.

*Tarpana*<sup>[6]</sup> with *Jeevantyadi ghrita*<sup>[7]</sup> and *Patoladi ghrita*<sup>[8]</sup> gives nourishment, *Ghrita* is one among the best *Rasayana* drugs present in prescribed *ghrita* are *Chakshushya* and *Pittahara*.

*Annalepa* acts as *bhrumhana* and *balya*.

*Basti*<sup>[9]</sup> is the best treatment for *Vata* as *basti* drug first reaches to the *Pakvashaya* (large intestine). *Pakvashaya* is the chief site of *Vatadosha*. *Rajayapana basti* contain *mamsarasa* hence acts as *rasayana*, *balya* and *vatahara* also helps for correction of *Mamsagata dushiti*.

*Putapaka*<sup>[10]</sup> also consists of *mamsa rasa* which is again acts as *rasayana*.

Oral medication which are prescribed also have *vatahara* and *rasayana* property.

**CONCLUSION**

Lateral rectus muscle is extra ocular muscle supplied by 6<sup>th</sup> cranial nerve i.e Abducence nerve. Almost all lateral rectus palsies are acquired in later life and are caused by conditions that have damaged the 6<sup>th</sup> cranial nerve, which supplies to the lateral rectus muscle. Typical features of lateral rectus palsy include sudden onset of horizontal double vision (Diplopia) limited outward movement of effected eye (Restricted movement towards temporal side)

In *Ayurveda* we can consider the involvement of *vata* so in this condition *vatahara* line of treatment was adopted, Patient was completely relived from complaints after 2 sitting of treatment and 1 month of follow up with oral medications and even after 1year there is no reoccurrence and vision is also improved and results observed were convincing and satisfactory.

**REFERENCES**

1. Shastri Kashinath, editor, (First ed.). Ashtanga Hridaya of Vagbhata, Uttarsthana; Drustiroga vignaniyadyaya: Chapter 12, Verse 2-5. Varanasi: Chowkhambha Sanskrit Series, 1994; 457.
2. Takaral kevala krishana, editor, (Revised ed.). Sushruta samhita of Sushruta, Uttarantra; Drustigataroga vignaniyadyaya: Chapter 7, Verse 11-15. Varanasi: Chowkhambha Sanskrit Series, 2017; 33.
3. Ambikadutta shastri kaviraj, editor, (Revised ed.). Sushruta samhita of Sushruta, Sutrasthana; Virechanadravyavikalpa vignaniyadyaya: Chapter 44, Verse 77. Varanasi: Chowkhambha Sanskrit Series, 2018; 216.
4. Tripathi Ravi Dutta, editor, (Revised ed.). Ashtanga sangraha of Vagbhata, Sutrasthana; Nasyavidhi: Chapter 29, Verse 3. Varanasi: Chowkhambha Sanskrit Series, 2018; 190.
5. Shrivatsav Shailaja, editor, (Revised ed.). Sharangadhara samhita of Sharangadhara, Uttarakhanda; Netraprasadhana vidhi: Chapter 13, Verse 2. Varanasi: Chowkhambha Sanskrit Series, 2017; 483.
6. Takaral kevala krishana, editor, (Revised ed.). Sushruta samhita of Sushruta, Uttarantra; Kriyakalpaadyaya: Chapter 18, Verse 5. Varanasi: Chowkhambha Sanskrit Series, 2017; 109.
7. Shastri Kashinath, editor, (First ed.). Ashtanga Hridaya of Vagbhata, Uttarsthana; Timirapratishoda adyaya: Chapter 13, Verse 2-3. Varanasi: Chowkhambha Sanskrit Series, 1994; 461.
8. Shastri Kashinath, editor, (First ed.). Ashtanga Hridaya of Vagbhata, Uttarsthana; Timirapratishoda adyaya: Chapter 13, Verse 6-9. Varanasi: Chowkhambha Sanskrit Series, 1994; 462.
9. Shastri Kashinath, editor, (Revised ed.). Charaka Samhita of Charaka, Siddhisthana; Kalpanasiddhiadyaya: Chapter 1, Verse 38-40. Varanasi: Chowkhambha Sanskrit Series, 2020; 893.
10. Takaral kevala krishana, editor, (Revised ed.). Sushruta samhita of Sushruta, Uttarantra; Kriyakalpaadyaya: Chapter 18, Verse 26. Varanasi: Chowkhambha Sanskrit Series, 2017; 113.