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AYURVEDIC MANAGEMENT OF AMBLYOPIA WITH REFERENCE TO VATAJA TIMIRA-A SINGLE CASE STUDY

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Abstract: Amblyopia, commonly known as "lazy eye," is a visual disorder that occurs during childhood. It is a condition where one eye has reduced vision that cannot be fully corrected with glasses or contact lenses, even if there is no structural problem with the eye itself. The brain and the affected eye do not work synchronously leading to reduced visual acuity in that eye. The condition usually develops in early childhood, and if left untreated, it can cause permanent vision loss in the affected eye. Amblyopia typically affects only one eye, but in some cases, it can occur in both eyes. In Ayurveda, a direct explanation for amblyopia is not found but clinical correlation can be made with Vataja Timira clinically based on its symptoms and the management strategy can be planned. The treatment for amblyopia is aimed to improve the vision in the affected eye by meticulously engaging the lazy eye and training the brain to process visual information more effectively. The effectiveness of treatment depends on various factors, including the age of the patient and the severity of amblyopia. Treatment is generally more successful if started at a younger age when the visual system is still developing. Ayurvedic treatment protocol includes Eye exercise, Nasya, Netrapariseka, Tarpana and internal medications like Saptamritlauha, Shatavarichurna, Shankha Bhasma, Praval Bhasmato strengthen and correct muscular defects and also improve ocular nutrition.

Keyword's - Amblyopia, Timira, Ayurveda therapies

Introduction: Amblyopia refers to partial reversible loss of vision in one or both eyes, for which no cause can be found by physical examination of the eye, i.e. there is an absence of any organic diseases of ocular media, retina and visual pathway ⁽¹⁾. Reduction in visual acuity, crowding phenomenon, no change in visual acuity with a neutral density filter, unaffected color vision and eccentric fixation are the main characteristics of amblyopia ⁽²⁾. Amblyopia is mainly of 4 types: Stimulus deprivation amblyopia (amblyopia ex anopsia), strabismic amblyopia, anisometric amblyopia, ametropic amblyopia. Amblyopia is very common during childhood, with a worldwide prevalence ranging between 0.2% and 6.2% ⁽³⁾. The principles of management in contemporary medical science are the removal of opacity in the media, full correction of refractive errors and occlusion therapy along with atropine penalization, pleoptics and CAM stimulator therapy. In Ayurveda, *Timira* is the broad term given to the decrease in the visual acuity of single or both eyes. The severity of *Timira* depends on the involvement of different Patala and Dosha ⁽⁴⁾. In Ayurveda, the management of *Timira* is divided into three stages; Precaution and prevention which includes do's and don'ts to avoid refractive errors, oral medications and topical procedures like *Netraparisheka* (eye wash with medicated water), *Tarpana* (ponding of medicated ghee over eyes), *Nasya* (nasal drop instillation after *Snehan* and *Swedana*), *Anjana* (Collyrium) etc ⁽⁵⁾. Hence in this single case study the same protocol has been followed along with eye exercises with occlusion therapy in a proper sequence.

A Case Study:

A 15 years old male patient came to the Shalaky Department OPD of XXX, Jaipur with chief complaint of blurring of vision in right eye for 1 year. The history of present illness reveals that the patient was apparently well before 1 year and then noticed that he had difficulty in seeing distant objects and letters with his right eye. After consulting an ophthalmologist at a private hospital, he was diagnosed with Amblyopia in right eye and was advised spectacles. But he didn't get much relief even after using spectacles and was advised carboxymethylcellulose 2 drops thrice a day in each eye for symptomatic relief. But after using this drop he did not get any improvement. Hence he approached our Hospital for further treatment.

Eye Examinations:

S. No.	Examination of	Right	Left
1	Eye Lashes	Normal	Normal
2	Cornea	Normal	Normal
3	Eye lids	Normal	Normal
4	Pupil	Central, regular	Central, Regular
5	Pupillary light reflex	Direct and consensual intact reflex.	Direct and consensual intact reflex.

6	IOP	17 mm of Hg	16 mm of Hg
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Refraction and visual acuity test: 21st February 2023

Auto Kerato refractometry:

	Spherical	Cylindrical	Axis
Right	-2.75	-0.25	180
Left	-1.00	0	0

Visual Acuity:

	Distant Vision	Near vision
Right	4/60	N/6
Left	6/12 partial	N/6

Treatment:1st visit:21st February 2023:

1.Eye exercise with left eye occlusion	Continue till next follow up for 4-5 Hours per day.
2.Nasya with KsheerBala101 oil	3 days
3.Eye wash with Triphalachurna 1gm Yastimadhuchurna 1gm Lodhrachurna 1 gm	3 days
4.Tarpana with Patoladighrita	7 days Duration
5.Saptamrit lauha 500mg	BD/PC/PO with luke warm water for 14 days
6.Shatavari churna 5gm ShankhaBhasma 500mg PravalBhasma 250mg	BD/PC/PO with milk for 14 days

Prescribed lens:

	Spherical	Cylindrical	Axis
Right	-2.75	0	0
Left	-0.75	0	0

Vision test with prescribed lens:

	Distant Vision	Near vision
Right	6/6	N/6
Left	6/6	N/6

Follow ups		Vision Acquity without glass		Prescribed lens				
					Spheri cal	cylindrical	Axis	
1st visit	21 st February, 2023	Distant vision	Right	4/60	Right	-2.75	0	0
			Left	6/12(p)	Left	-0.75	0	0
1st follow up	1 st March, 2023	Distant vision	Right	6/24	Right	-2.5	0	0
			Left	6/9(p)	Left	-0.5	0	0
2nd follow up	6 th April, 2023	Distant vision	Right	6/18	Right	-2.5	0	0
			Left	6/9	Left	-0.5	0	0
3rd follow up	31 st April, 2023	Distant vision	Right	6/12	Right	-2.25	0	0
			Left	6/6(p)	Left	-0.5	0	0
4th follow up	12 th june,2023	Distant vision	Right	6/9(p)	Right	-1.75	0	0
			Left	6/6(p)	Left	-0.25	0	0

Treatment-The same treatment was given which was already going on from 1st visit.

Prescribed lens:

	Spherical	Cylindrical	Axis
Right	-1.75	0	0
Left	-0.25	0	0

Vision test with prescribed lens:

	Distant Vision	Near vision
Right	6/6	N/6
Left	6/6	N/6

Discussion –

The line of management of Timira⁶ includes Snehana, Raktamokshana, Virechana, Nasya, Anjana, Shirobasti, Basti, Tarpana, Lepa and Seka that are to be followed repeatedly. Among these Netraparisheka, Nasya and Tarpana were followed in this case. On the basis of symptoms, amblyopia can be correlated with VatikaTimira.⁷ Hence, line of management VatikaTimira was adopted.

Nasya with KsheerbalaTaila (101), improves performance of the indriyas (*Chakshurendriya*). Due to the *Balya* and *Brimhana* qualities of the medicine it rectifies nerve irritation, improves muscle strength and has balya and rasayana effect.

In **Saptamritalauha** has Triphala and *Yashtimadhu* which are *TridoshaShamak* which rectifies the Doshik imbalance, have *Chakshushya* property. Iron present in the form of *lohabhasma* provides nourishment and rectifies ocular anemia⁸.

Shatavari (*Asparagus racemosus*) *SiddhaGhrita* has properties like *Madhur*, *tikta rasa*, *madhurvipak*, *sheet virya* and *guru*, *singdha*, *mrudugunas*. It is also *vatapittashamak* and *kaphakar* along with special properties like *Chakshushya* and *Rasayana*⁹.

Tarpan with PatoladiGhrita provides omega-3 & 6 fatty acids, Vit A, E & K & antioxidants¹⁰. The Ghrita has the quality of trespassing into minute channels of the body. Hence, when applied in the eye, it enters deeper layers of *Dhatu*s and cleanses every minute part of them. Milk is also used for *Tarpana* which contain variety of Vitamins, minerals, amino acids etc¹¹.

Netraparisheka with *Triphalachurna*, *Yastimadhuchurna*, *Lodhrachurna* acts locally. it helps to prevent *Ruk* (eye pain), *Toda* (pricking pain), *Kandu* (eye itching), *Gharsha* (feeling of friction in the eyes), *Ashru* (excessive lacrimation), *Daha* (burning sensation), *Raga* (eye redness). The main function of eye wash is *ChakshusyaRasayana*¹².

Eye Exercises with Patching bring the nonfunctional muscles back to work when the normal eye is patched and thereby improve its functionality.

Conclusion -Amblyopia can be correlated with *VatajaTimira* on the basis of clinical features, hence, the management principles of *VatajaTimira* was adopted without surgical intervention. Ayurveda medicines are beneficial in strengthening the ocular structures by providing nourishment through micronutrients which are present in formulations like *SaptamritLauha*, *ShatavariChurna*, *ShankhaBhasma* and *PravalBhasma*. Topical procedures have direct action at the specific site and thereby provide better results. In present case, topical procedures like *Netraparisheka*, *Nasya* and *Tarpana* adopted in a sequence which provided ultimate strength to ocular muscles and other structures and there by improved vision. Eye exercises with eye patching have an additive effect on improving the muscle tone in an amblyopic eye and restore the nonfunctionality of the lazy eye. This study emphasizes on the importance of integrated approach in healthcare system by blending the Ayurvedic therapies and medications along with patching. As this is a single case study, it is necessary to conduct a proper study on a large-scale to draw more concrete conclusions.

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¹¹ <https://en.wikipedia.org/wiki/Milk> retrieved on 21 feb 2016

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