

A Clinical Study on Vrisha Gritha Aschyothana and Paana in the Management of Prathamapatalagata Timira

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Myopia or short-sightedness is a type of refractive errors in which parallel rays of light coming from the infinity are focused in front of the retina when accommodation is at rest. Simple myopia or developmental myopia is the commonest verity. Aschotana is the process of installation of medicine drop by drop from a height of 2 angulas in the Kaneenika Sandhi (Medial Canthus). Aschotana is the primary method of ophthalmic medication and is effective in the majority of eye diseases. Paana administered internally normalizes the aggravated dosha without expelling or disturbing the other normal doshas and spreads all over the body. Vaasa Gritha is capable of pacifying dosha which is found to be in its chayavastha and also enhances digestive fire and stabilizes sense organs. Vrisha gritha administered in the form of aschyothana and paana acts over prathamapatala (tejojalashritha patala) of Netra. Tejo component is alochakapitta and raktha dhathu pradhana and vrisha has raktha and pitta shamana action because of its sheetha virya and chakshushya property and its karmukatha. Hence it acts over prathamapatala. Jala component implies for rasa dhathu. Gritha by the virtue of its property is pitta shamaka and chakshushya and nourishes the rasa dhathu.

NEED FOR THE STUDY

The usual treatment for simple myopia is an optical correction (spectacles or contact lenses) to restore distance vision, but it fails to decrease the risk of posterior segment sequel of myopia. Surgical intervention although popular is

ABSTRACT

Forty diagnosed cases of Prathama Patalagata Timira (Simple myopia) were and registered for clinical study irrespective of gender, socioeconomic status and religion with an aim to know the efficacy of Vrisha Gritha Aschyothana (topical eye drops) and Paana (internal medication). The study was open labeled single-arm clinical study, managed with Aschyothana for 7 days and Paana for 60 days. To present the study in a scientific manner criteria's were made Avyaktha Darshana (Poor vision for distance), Auto Refractometry, Visual efficiency by Snellen's chart for assessment and statically evaluation. Obtained results were found to be significantly effective.

KEYWORDS: Parthamapatalagata timira, Vrisha Gritha, simple myopia, vasa panchanga

INTRODUCTION

Prathama Patalagata Timira (simple myopia) is one among the Drustigata Netra Roga (disease of refractive media) presenting as Ayaktha Darshana (difficulty in distant vision) hence can be co-related to Simple Myopia. Overall prevalence is 20%-40% of population sharpest rise occurs at school going age. Refractive Error is the second leading cause for blindness in India. Vrisha Gritha contains panchanga (5 parts) of asa (Adathoda vasica) having properties like kaphanissaraka (mitigates vitiated Kapha dosha) and Gritha raktapittashamaka (reduces vitiation of Raksha and pitta dosha), Rasayana (rejuvenation), chakshushya (beneficial for eyesight). Hence this study was planned to evaluate the effectiveness of Vrisha Gritha Aschyothana and Paana in the management of Parthama Patalagata Timira (Simple Myopia).

not successful in all individuals, complications such as dry eye and night glare can be annoying everyone. It is advised only in the condition of stabilized myopia. Hence, the necessity of other treatment measures which can prevent the further progression of the disease is the main focus.

In ayurvedic classics, various way of approach in this regards, like netra kiryakalpas, detoxication procedures, palliative measures, which are said to enhance visual acuity, improve in the general health of the eye and also prevents further complications.

Aschotana is mentioned as the first line of treatment in eye diseases. More than 80% of the medicine will be drained into the nasolacrimal duct through punctum which maintains the integrity of the drainage. In sahasra yoga there is mention of vrisha gritha which is indicated in timira. For all the urdvajatrugata vikara nishi (night) is the most ideal and effective aushada sevana kala. In this study an effort has been made to evaluate the efficacy of aschyotana and paana of vrusha ghrita in the management of simple myopia, as the medicines are easily available, cost-effective, easily administered without any complications.

MATERIALS AND METHODS

The current study will be convenient sampling an open-label single arm prospective interventional clinical study with pre hoc and post hoc test design. Patients attending the OPD and

IPD of shalakyatantra Shri Dharmasthama Manjunatheshara College of Ayurveda and Hospital, Hassan.40 patients fulfilling the inclusion criteria, were selected by convenient sampling method.

DIAGNOSTIC CRITERIA

Clinical features of Prathama patalagata timira (simple myopia)

- Avyaktha Darshana – Poor vision by distant
- Diagnosed by –
 1. Auto Refractometry
 2. Visual efficiency by Snellen’s chart

Inclusion criteria

- Patients complaints of difficulty in distant vision
- Patients under the age group of 5-20 years.
- Patients who are ready to sign an informed consent form and parent assent form.

Exclusion Criteria

- Pathological myopia, high myopia with degenerative and retinal changes, associated with endocrinal and nutritional disorders.
- Myopia associated with neighboring structural deformities like cataract, corneal opacity.

Patients suffering from any of the systemic disorders such as hypertension, diabetes, tuberculosis, syphilis.

POSOLOGY



OBSERVATIONS AND RESULTS

The observation, results and statistical analysis of the present study are elaborated below:

Age: The age limit of the patients in the study was 5 to 20 years. The majority (58.2%) of the patient involved in the present study were in the age group of 15-20 years, followed by 20.9% belong to the age group 5-10 and 15-20 years.

Gender: The present clinical study on simple myopia reveals that here is a female group is predominance 58.1% followed by 41.9% of the male gender group.

Religion: The present study shows that the maximum number of patients 95.3% were Hindus followed by Christians and Muslims of about 2.3%.

Educational status wise: Majority of the patients in this study were undergraduates (30.2%), primary school level (25.6%), pre-university level (16.3%), high school level (14%).

Aggravating factors: - Majority of aggravating factors are by watching mobile (32.6), watching computer (25.6%), prolong reading (16.3%) myopia is aggravated by close work, watching Television.

History of using Visual Aids: - Maximum (60.5%) of the patients of use visual aid, Myopia cases requires proper visual aids for the improvement and sustainment of vision.

Family history of eye disease: - Genetics plays some role in the biological variation of the development of the eye. Hence in the present study, there were about 32.6% of them had a family history of Myopia

RESULTS

- Completed 40 patients were taken for statistical analysis excluding the dropouts.
- For primary parameters, **Repeated Measures ANOVA** was done for analyzing the difference in time of significant change.
- For primary parameter, **Paired T-test** was also done to know significance at BT and AT as post hoc

RESULT ON VISUAL ACUITY FOR DISTANT VISION OF 80 EYES REPEATED MEASURE ANOVA

Table No.1- Showing the repeated measure ANOVA result on visual acuity for the distant vision of 80 eyes

Variable	N	Mean	Df	F value	P-value	Greenhouse-geisser error df	Remarks
DV-BT	80	51.600	2.517	36.542	0.000	198.807	S
DV-15D		54.250					
DV-30D		57.900					
DV-45D		61.600					
DV-60D		63.650					
DV-75D		63.725					

The mean value on visual acuity for the distant vision of 80 eyes for 40 patients at each level of study including follow up, it is found that the mean value of distant vision before treatment has improved from 51.600% to 63.7250% at Greenhouse-guesser Error at df 198.807 which is statistically significant at p-value < 0.001.

Table No2: Showing the repeated measure anova result on best-corrected visual acuity for the distant vision of 80 eyes

Variable	N	Mean	Df	F value	P value	Greenhouse-geisser error df	Remarks	Df
BCVADV-BT	80	90.025	2.328	20.660	0.030	183.921	S	2.328
BCVADV-15D		90.125						
BCVADV-30D		90.725						
BCVADV-45D		90.612						
BCVADV-60D		90.787						
BCVADV-75D		90.800						

The mean value of best corrected visual acuity for distant vision of 80 eyes for 40 patients at each level of study including follow up it is found that mean value of distant vision before treatment has not much improved from 90.0250% to 90.8000 % at Greenhouse-geisser Error at df 183.921 which is statistically not significant at p value < 0.001

Table No 3: Showing the repeated measure anova result on visual acuity for distant vision for both eyes

Variable	N	Mean	Df	F value	P value	Greenhouse-geisser error df	Remarks
BE DV-BT	40	60.650	2.608	13.556	.000	101.712	S
BE DV -15D		60.275					
BE DV-30D		63.700					
BE DV-45D		66.250					
BE DV-60D		67.125					
BE DV-75D		67.275					

The mean value of visual acuity for the distant vision for both eyes of 40 patients at each level of study including follow up, it is found that mean value of distant vision before treatment has improved from 60.6500% to 67.2750 % at Greenhouse-geisser Error at df 101.712 which is statistically significant at p value< 0.001

Paired't test

Table No4: Showing the paired t test result on visual acuity for distant vision of 80 eyes

BT-AT	Mean BT	Mean AT	Mean diff	SD	SE	t value	Df	P value
DV	51.600	63.650	-12.05	14.451	1.615	-7.458	79	0.008

It was observed that there was a significant difference in mean values of before and after treatment in relation to visual acuity for the distant vision of 80 eyes of 40 patients with a mean difference of -12.05 , which is statistically significant as the P-Value <0.008

Table No5: Showing the paired t test result on visual acuity for distant of both eyes

BT-AT	Mean BT	Mean AT	Mean diff	SD	SE	t value	Df	P value
DV	60.6500	67.1250	-6.475	9.732	.360	-4.208	39	0.008

It was observed that there was a significant difference in mean values of before and after treatment in relation to visual acuity for the distant vision of both eyes in 40 patients with a mean difference of -6.475, which is statistically significant as the P-Value <0.008

DISCUSSION AND CONCLUSION

On the basis of the present study, the following conclusions can be drawn

- *Timira, kacha and linganasha* are the progressive stages of a disease. When vitiated dosha lodges in *Prathamapatala* as of netra it is termed as *Timira* and it is *sadhya* and in this study, *Prathamapatalagata Timira* is correlated with Simple myopia.
- Simple myopia is the most prevalent condition in the present era. It limits the
- Occupational choices with substantial social, educational, economic impact and contributes to increased risk of vision-threatening conditions.
- After completion of the study it can be concluded that age, education, aggravating factors, visual aid and family history have a significant role in the development of *Timira* (simple myopia)

- Clarity of vision was found to be improved with research drug.
- The mean value on visual acuity for the distant vision of 80 eyes of 40 patients at each level of study including follow up has improved from 51.600% to 63.725% which is statistically significant at p value < 0.001.
- The mean value of visual acuity for the distant vision for both eyes of 40 patients at each level of study including follow up t has improved from 60.6500% to 67.2750 % which is statistically significant at p value< 0.001.
- Effect of *Vrisha Ghrita Paana and Aschyothana* is found to be significantly effective in reducing the signs and symptoms of *Prathamapatalagata Timira/ Simple myopia*

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