



## Clinical Research

## A clinical study on the role of *Akshi Tarpana* with *Jeevantyadi Ghrita* in *Timira* (Myopia)

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### Abstract

Myopia is a major public health problem pertaining to eye that entails substantial societal, personal, educational, and economical impact. Various surveys in India have found the prevalence of myopia ranging from 6.9% to 19.7%. Myopia progression is irreversible and methods for the correction of myopia are not without complications. Myopia closely resembles *Timira* involving first and second *Patala* in terms of symptoms, anatomical structures involved, and the pathogenesis of the disease. The study is aimed at evaluating the efficacy of the *Akshi-Tarpana* procedure with *Jeevantyadi Ghrita* in fresh and old myopes. A total of 54 patients (108 eyes) having myopia  $\geq -6$  D were registered for the study and divided into two groups (Group A, *Akshi-Tarpana* with *Jeevantyadi Ghrita*, and Group B, *Akshi-Tarpana* with plain *Go Ghrita*), by stratified sampling. The procedure was done in 5 sittings of 5 days each with an equal interval of 5 days between each sitting. A total of 22 patients in Group A and 18 in Group B completed the treatment. Obtained data were statistically analyzed using a *t*-test and the study reveals that objectively, 09.30% and 05.55% eyes were cured, 16.28% and 02.78% markedly improved, and 34.88% and 11.11% moderately improved in Group A and B, respectively.

**Key words:** *Akshi-Tarpana*, *Jeevantyadi Ghrita*, *Patala*, *Timira*

### Introduction

Myopia is a major public health problem pertaining to eye that entails substantial societal, personal, educational, and economical impacts. Myopia is the state of refraction in which parallel rays of light are brought to focus in front of the retina of a resting eye.<sup>[1]</sup> Myopia is measured by the spherical power in diopters of the diverging lens needed to focus light onto the retina, which can be expressed as the spherical equivalent or refraction in the least myopic meridian.<sup>[2,3]</sup> The clinical correlates of myopia include blurred distance of vision, eye rubbing, and squinting.

Myopia is highly prevalent in our society, affecting at least 25% of the adult population in the United States<sup>[4]</sup> and is even more common in Asian countries, affecting up to 84% of adolescents.<sup>[5]</sup> Various surveys in India have found the myopia prevalence ranging from 6.9% to 19.7%.<sup>[6,7]</sup> Furthermore, its

prevalence may be increasing over time as suggested by some studies in various countries including Singapore, Australia, and the United States.<sup>[8-11]</sup> Due to the significance of myopia as a global public health concern, it was chosen as a priority for Vision 2020, World Health Organization's global initiative for the elimination of avoidable blindness by year 2020.<sup>[12]</sup>

Though the modern counterpart has made tremendous and remarkable progress in the field of ophthalmology but no satisfactory and universally accepted treatment for myopia is available. Myopia progression is irreversible and there is no cure. Methods for the correction of myopia are not without complications, including corneal infections due to contact lens wear and corneal scarring and persistent corneal haze from refractive surgery.<sup>[13]</sup> Refractive surgeries for treatment of myopia are both costly and unsuitable for children's eyes and do not change axial elongation, which is the commonest source of myopia.<sup>[14]</sup> Hence, the Ayurvedic science can be explored to find a better alternative to manage this condition.

Myopia closely resembles with *Timira* involving first and second *Patala* in terms of symptoms, anatomical structures involved, and the pathogenesis of the disease. Though various drugs and local therapeutic procedures like *Nasya*, *Anjana*, *Akshi Tarpana*, etc., have been mentioned in Ayurvedic texts for the

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management of *Timira*, but *Akshi-Tarpana* is the foremost on account of its sound literary and practical evidences. Previously, many works have been carried out on the efficacy of *Akshi-Tarpana* in *Timira* (myopia) – with encouraging results but no one has conducted the study with *Shodhana Nasya* (as *Poorva-Karma*) prior to *Akshi-Tarpana* as indicated in all the *Ayurvedic* texts. In *Timira* (myopia), *Chakshushya*, *Rasayana*, and *Tridosha* mitigating action might be helpful. *Ghrita* is one among the best *Chakshushya* drugs, and most of the contents of *Jeevantyadi Ghrita* have *Tridosha* pacifying action. So *Jeevantyadi Ghrita* having all the properties was selected for the study. Also, previous study<sup>[15]</sup> reported almost equal efficacy of *Akshi-Tarpana* with plain *Go Ghrita* and medicated *Ghrita* in *Timira* (myopia). Keeping these points in view, the present clinical study was planned with following aims and objectives:

- (1) to evaluate the efficacy of *Akshi-Tarpana* with *Jeevantyadi Ghrita* and plain *Go Ghrita* in *Timira* (myopia) in fresh and old myopia and
- (2) to compare the efficacy of *Akshi-Tarpana* with *Jeevantyadi Ghrita* and plain *Go Ghrita* in *Timira* (myopia).

## Materials and Methods

### Patient selection

Patients attending the OPD and IPD of Department of Shalakyas, IPGT and RA Hospital, with signs and symptoms of *Timira* (myopia) were registered irrespective of their sex, religion, occupation, education, etc. A total of 54 patients (108 eyes) were recruited for the study. Myopia was defined as a mean spherical equivalent of  $\leq -0.50$  D, as described by Quinn *et al.*<sup>[16]</sup> An elaborative case-taking proforma was specially designed for the purpose of incorporating all aspects of the disease on Ayurvedic and modern parlance.

Informed consent was taken from all the registered patients for the trial.

### Sampling technique

A total of 54 registered patients were divided into two groups (Group A, 28 patients; Group B, 26 patients) by a stratified sampling method in order to maintain the uniformity in both the groups in terms of dioptric power. The study was kept single blind so as to avoid any psychological effect from patient's side.

In Group A, *Akshi-Tarpana* was done with *Jeevantyadi Ghrita*<sup>[17]</sup> and in Group B, *Akshi-Tarpana* was done with plain *Go Ghrita*.<sup>[18]</sup>

### Inclusion criteria

The study patients included those within the age group of 08–30 years having signs and symptoms of *Timira* (myopia) up to  $-6.0$  D.

### Exclusion criteria

Patients having any other known ocular pathology, e.g., cataract, corneal opacity, etc., with a history of iridocyclitis, retinal disease, etc., were excluded. Patients aged below 07 years and above 30 years and having a dioptric power more than  $-6$  D were also excluded.

### Investigations

Following investigations were carried out in order to rule out any systemic disease:

- Routine hematological tests: Hb, TC, DC, ESR
- Biochemical tests: Blood sugar (F), serum cholesterol
- Urine test: Routine and microscopic
- Stool test: Routine and microscopic

### Drug selection and dosage

For the *Poorva-Karma* of the procedure, following drugs were used in both the groups:

- *Eranda Bhrishta Haritaki*: 05 g with lukewarm water for 3 days.
- *Nasya* with *Krishnadya Taila*: 4–8 drops per nostril for next 3 days.

For the main procedure (*Akshi-Tarpana*), following drugs were used:

- *Jeevantyadi Ghrita* in Group A: Quantity sufficient
- Plain *Go Ghrita* in Group B: Quantity sufficient

*Akshi-Tarpana* was carried out in 5 sittings of 5 days each, with an equal interval (noninterventional period) of 5 days between each sitting in both the groups.

The duration of the procedure was 51 days.

Follow-up was done for 1 month after completion of the course of the procedure.

### Assessment criteria

#### Subjective

The patients were subjectively assessed based on the symptoms – *Durastha Avyakta Darshana* (indistinct distant vision), *Vihwala Darshana* (blurred vision), *Shirobhitapa* (headache), *Netrasrava* (watering), *Netrayasa* (eye strain), and *Netradaha* (burning sensation) – by adopting the following scoring pattern:

- Cured: 100% relief in signs and symptoms and no recurrence during the follow-up study.
- Marked improvement: 76–99% improvement in signs and symptoms.
- Moderate improvement: 51–75% improvement in signs and symptoms.
- Mild improvement: 26–50% improvement in signs and symptoms.
- Unchanged: Up to 25% reduction in signs and symptoms.

#### Objective

Unaided visual acuity (UAVA) was measured using Snellen's chart and was recorded as numerical convention and later converted into percentage as per the method of Lyle.<sup>[19]</sup> Refraction was done by using Snellen's chart:

- Cured: 1 D reduction in the spherical dioptric power or complete remission.
- Marked improvement: 0.75 D reduction in the spherical dioptric power.
- Moderate improvement: 0.50 D reduction in the spherical dioptric power.
- Mild improvement: 0.25 D reduction in the spherical dioptric power.
- Unchanged: No reduction in the spherical dioptric power.

### Statistical analysis

The effect of therapy in both the groups is assessed by applying *t*-test. The results obtained are considered highly significant for  $P < 0.001$ , significant for  $P < 0.01$ , and insignificant for  $P < 0.05$  or  $P > 0.05$ .

### Observations

Out of a total of 54 patients (108 eyes) recruited for the study, maximum patients were from the age group of 14–19 years followed by the age group of 20–25 years. A total of 81.48% patients were students. As the disease manifests in school-going children, and also, it is a proven fact that simple myopia usually begins in childhood since the eyes continue to grow during childhood, myopia almost always occurs before the age of 20 and then gets stable in adulthood.

A total of 51.85% of patients were males followed by 48.15% females. Although there is no theoretical description regarding any gender predominance in myopia, Jensen<sup>[20]</sup> in 1985 reported the female-to-male ratio as 4.4:3.6. A higher rate in females is also confirmed by results obtained from a study on Greek students having 46% females and 29.7% male students as myopic.<sup>[21]</sup> But in the present study, a slight male predominance was observed which could be a matter of chance.

A total of 94.44% patients belonged to the urban area, and according to a previous study, it was observed that in urban areas, myopia rates were higher than those in rural areas [Table 1].<sup>[22]</sup>

A total of 51.85% patients had *Vata–Pitta Prakriti*. Though, *Timira* (myopia) occurs due to the aggravation of *Vata* as depicted in Ayurvedic texts, as this sample is very small, no definite correlation between *Sharira Prakriti* and *Timira* occurrence could be established [Table 1].

It was found that 53.70% patients were having a negative family history. A total of 62.96% patients had chronicity above 2 years, 18.52% patients had chronicity between 1 and 2 years, followed by 1.85% patients having up to 1-year chronicity. Also, 16.67% patients were newly detected myopes [Table 1].

Maximum number, i.e. 81.48%, of patients were having *Diwaswapa* as *Nidana*, followed by 62.96% having *Ratrijagarana*; 59.26% patients had *Mootravegadharana*, 46.30% had *Sookshmanireekshana*, and 42.59% patients had *Malavegadharana* as their *Nidana*. *Shoka* was found in 29.63% patients, *Krodha* in 24.07% patients, and *Klesha* in 22.22% patients [Table 1].

A total of 90.74% were having the involvement of first *Patala* and 09.25% of the patients were having the involvement of second *Patala* [Table 1].

It was found that 60.18% of eyes of patients had an unaided visual acuity of 6/60 or less, 23.15% eyes had a visual acuity of 6/24–6/36, while 12.03% eyes had a visual acuity of 6/12–6/18 and only 04.63% had a visual acuity of 6/6–6/9 [Table 1].

A total of 23.15% eyes were having a myopic spherical dioptric power of 1.25–2.00 D and 2.25–3.00 D each, followed by 21.30% eyes having a dioptric power of 0.25–1.00 D, while 14.81% eyes had a dioptric power of 3.25–4.0 D and 09.26% eyes had a dioptric power of 4.25–5.00 D, and only 07.41% had a dioptric power of 05.25–6.00 D [Table 1].

Hundred percent patients were having *Durastha Avyakta Darshana* (indistinct distant vision), while 90.74% patients had *Vihwala Darshana* (blurred vision) and only 09.26% of patients had *Dwidha Darshana* (diplopia) as chief complaints. A total of 61.11% patients had *Netrayasa* (eye strain), 48.15% patients were having *Shirobhitapa* (headache), 20.37% were having

**Table 1: General observation-wise distribution of 54 patients of *Timira* – myopia**

General observation	No. of patients		Total	Percentage
	Group A	Group B		
Age group (14–19 years)	09	11	20	37.04
Sex (male)	16	12	28	51.85
Habitat (urban)	26	25	51	94.44
<i>Prakriti</i> ( <i>Vata–Pitta</i> )	14	14	28	51.85
Family history (negative)	12	17	29	53.70
Chronicity (above 2 years)	17	17	34	62.96
<i>Nidana</i> ( <i>Diwaswapa</i> )	25	19	44	81.48
<i>Patala</i> involvement (1 <sup>st</sup> <i>Patala</i> )	25	24	49	90.74
Unaided visual acuity (6/60 or less)	36 (no. of eyes)	29 (no. of eyes)	65 (no. of eyes)	60.18
Spherical dioptric power (1.25–2.00)	12 (no. of eyes)	13 (no. of eyes)	25 (no. of eyes)	23.15
Spherical dioptric power (2.25–3.00)	11 (no. of eyes)	14 (no. of eyes)	25 (no. of eyes)	23.15

**Table 2: Chief complaints and associated complaint-wise distribution of 54 patients of *Timira* – myopia**

Chief complaints	No. of patients		Total	Percentage
	Group A	Group B		
<i>Durastha Avyakta Darshana</i>	28	26	54	100
<i>Vihwal Darshana</i>	14	15	49	90.74
<i>Dwidha Darshana</i>	03	02	05	09.26
Associate complaints				
<i>Netrasrava</i>	04	07	11	20.37
<i>Netradaha</i>	13	13	26	48.15
<i>Shirobhitapa</i>	05	05	10	18.52
<i>Netrayasa</i>	17	16	33	61.11

*Netrasrava* (watering), and 18.52% patients had *Netradaha* (burning sensation) as associated complaints [Table 2].

## Results and Discussion

### Effect of therapies on subjective symptoms

*Durastha Avyakta Darshana* or indistinct distant vision was relieved by 43.33% ( $P < 0.001$ ) in 22 patients of Group A and by 40.48% ( $P < 0.001$ ) in Group B. *Vihwala Darshana* (blurred vision) was relieved by 44.19% in Group A ( $P < 0.001$ ) and by 34.48% ( $P < 0.001$ ) in Group B [Table 3].

The present clinical study shows that *Akshi–Tarpana* with both *Jeevantyadi Ghrita* and *Go Ghrita* is statistically equally effective in treating symptoms like *Avyakta Darshana* and *Vihwala Darshana* but percentage-wise, Group A has shown better results.

In associated symptoms, *Netrasrava* was relieved by 100%, *Netradaha* by 77.78%, *Netrayasa* by 80.77%, and *Shirobhitapa* by 76.66% which are statistically significant ( $P<0.001$ ) in Group A while in Group B, *Netrasrava* and *Netradaha* were relieved by 83.33%, *Shirobhitapa* by 80.00% and *Netrayasa* by 75.0% which are statistically significant ( $P<0.001$ ) [Table 3].

Group A is more effective in associated symptoms of *Netrasrava* and *Netrayasa* while Group B is more effective in managing *Netradaha*.

### Effect of therapies on clinical refraction

The dioptric power of the spherical lens was reduced by 19.13% in the right eye and 13.48% in the left eye in Group A, both the results being statistically significant ( $P<0.001$ ) [Table 4].

The dioptric power of the spherical lens was reduced by 09.80% in the right eye and 10.27% in the left in Group B, both the results being statistically significant ( $P<0.001$ ) [Table 4].

The above result shows that *Akshi-Tarpana* with *Jeevantyadi Ghrita* is more effective in the improvement of dioptric power (spherical glasses) as compared to plain *Go Ghrita*.

The dioptric power of the cylindrical lens was reduced by 20.45% in the right eye and 29.54% in the left in Group A, both the results being statistically insignificant ( $P<0.05$ ) [Table 4].

The dioptric power of the cylindrical lens was reduced by 07.14% in the right eye and 0.00% in the left eye in Group B, both the results being statistically insignificant ( $P>0.05$ ) [Table 4].

The above-mentioned results show that *Akshi-Tarpana* with *Jeevantyadi Ghrita* is more effective in the improvement of dioptric power (cylindrical glasses) as compared to plain *Go Ghrita*.

### Effect of therapies on fresh and old myopes

The dioptric power of the spherical lens in fresh myopes showed

46.15% improvement in the right eye and 30.0% improvement in the left eye in Group A.

The dioptric power of the spherical lens in fresh myopes showed 25.0% improvement in both eyes in Group B.

The results cannot be statistically evaluated as the sample size was small ( $n<6$ ) but it shows that *Akshi-Tarpana* with *Jeevantyadi Ghrita* is more effective in the improvement of dioptric power (spherical glasses) in fresh myopes as compared to plain *Go Ghrita*.

The dioptric power of spherical lens in old myopes was reduced by 15.69% in the right eye and 11.9% in the left eye of 18 patients of Group A, both the results being statistically significant ( $P<0.001$ ).

The dioptric power of the spherical lens in old myopes was reduced by 07.87% in the right eye and 08.46% in the left eye of 15 patients of Group B, both the results being statistically significant ( $P<0.01$ ). The above-mentioned results show that *Akshi-Tarpana* with *Jeevantyadi Ghrita* is more effective in the improvement of dioptric power (spherical glasses) in old myopes also as compared to plain *Go Ghrita*.

### Subjective

Overall effect of therapies on subjective symptoms in 40 patients of myopia (80 eyes) is as follows:

Total of 04.54% patients were cured in Group A and 11.11% in Group B. Marked improvement was seen in 22.73% patients in Group A and 11.11% in Group B. Moderate improvement was observed in 36.36% patients in Group A and 22.22% in Group B. A mild improvement was observed in 22.73% patients in Group A and 50% in Group B. No change was observed in 13.64% patients in Group A and 05.55% in Group B [Table 5].

### Objective

Overall effect of therapies on objective symptoms (spherical dioptric power) in 40 patients (80 eyes) of myopia is as follows:

On assessing the results objectively on the basis of the reduction in spherical power, it was found that 09.30% patients were cured in Group A and 05.55% in Group B. A total of 16.28% patients in Group A and 02.78% patients in Group B got a marked improvement. A total of 34.88% and 11.11% patients, respectively, in Groups A and B got a moderate improvement. A mild improvement was seen in 23.25% and 44.44% patients in Groups A and B, respectively. It was found that 16.28% patients in Group A and 36.11% patients in Group B were having unchanged refractive status even after treatment [Table 6].

Overall effect of therapy shows that *Jeevantyadi Ghrita* is more effective in objective symptoms also as compared to plain *Go Ghrita*.

**Table 3: Effect of Akshi-Tarpana on chief complaints of Timira of Groups A and B**

Chief complaints	Relieved after therapy			
	Group A		Group B	
	Percentage	P	Percentage	P
<i>Durastha Avyakta Darshana</i>	43.33	<0.001	40.48	<0.001
<i>Vihwal Darshana</i>	44.19	<0.001	34.48	<0.001
Associated complaints				
<i>Netrasrava</i>	100	–	83.33	–
<i>Netradaha</i>	77.78	–	80	<0.001
<i>Shirobhitapa</i>	76.66	<0.001	83.33	–
<i>Netrayasa</i>	80.77	<0.001	75.0	<0.001

**Table 4: Effect of Akshi-Tarpana on clinical refraction in patients of Timira of Groups A and B**

	Spherical lens				Cylindrical lens			
	Group A		Group B		Group A		Group B	
	Percentage	P	Percentage	P	Percentage	P	Percentage	P
RE	19.13	<0.001	09.80	<0.001	20.45	<0.05	07.14	>0.05
LE	13.48	<0.001	10.27	<0.001	29.54	<0.05	00.00	>0.05

**Table 5: Total effect of Akshi-Tarpana in subjective symptoms of patients of Timira of Groups A and B**

Overall effect	Group A		Group B	
	No. of patients	Percentage	No. of patients	Percentage
Cured	01	04.54	02	11.11
Marked improvement	05	22.73	02	11.11
Moderate improvement	08	36.36	04	22.22
Mild improvement	05	22.73	09	50.00
Unchanged	03	13.64	01	05.55

**Table 6: Objective assessment of the therapies in both groups of patients of Timira**

Overall effect	Group A (n=43)		Group B (n=36)	
	No. of eyes	Percentage	No. of eyes	Percentage
Cured	04	09.30	02	05.55
Marked improvement	07	16.28	01	02.78
Moderate improvement	15	34.88	04	11.11
Mild improvement	10	23.25	16	44.44
Unchanged	07	16.28	13	36.11

### Probable mode of action of Poorva-Karma before Akshi-Tarpana

As *Koshtha* is the site for *Pachaka Pitta* and it nourishes all other *Pittas* (including *Alochaka Pitta*) at their respective sites, *Kaya Shuddhi/Koshtha Shuddhi* definitely breaks the *Samprapti* of *Timira*. Therefore, at least *Koshtha Shuddhi* for 3 days is highly recommended.

*Shiro Shuddhi* by *Nasya* removes the *Srotorodha* and opens the channels to receive the *Sneha*. Eye is an organ which should be protected from vitiated *Kapha*. The *Shiro-Shodhana* definitely helps to protect the excessive vitiation of *Kapha*. Also, *Nasya Karma* is a specific treatment methodology mainly indicated for *Urdhvajatrugata Vikaras* in *Ayurveda*.

Before *Nasya*, *Abhyanga* is specifically done in *Murdha Pradesha* which causes vasodilatation in the skin and muscles by stimulating receptors of the sympathetic nervous system. Vasodilatation increases blood flow and helps to remove the toxic products.

Acharya Charaka has described the mechanism of *Swedana Karma* as it helps to dissolve *Shleshma*, makes the channels soft, by which *Vatadi Doshas* and other contents can flow through in their normal directions, and increases the secretion of vitiated *Shleshma* through the channel. So, due to *Ushna Guna* of *Swedana*, *Kapha Dosh* gets liquefied.<sup>[23]</sup>

When the lukewarm oil enters the nasal cavity, the network of *Srotamsi* carries the *Taila* towards the desired sites and cleanses the channel.

By *Shodhana* property of its (*Krishnadya Taila*) ingredients, probably removes the *Ama* at the cellular level and pacifies the vitiated *Vata* and *Kapha Dosh*. Due to *Stroto Shodhana* and *Vata-Kapha Shamana*, *Avarana* and *Sanga* of *Vata-Kapha Dosh* is removed and nutrition is brought to the respective sites.

*Kapha* should be controlled first; for this, *Nasya* is the best method and after that *Akshi-Tarpana* can be done for *Vatashamaka* properties.<sup>[24]</sup>

### Probable mode of action of Akshi-Tarpana

Considering the *Doshakarma*, the trial drug appears to be predominantly *Vatashamaka* followed by *Pittashamaka* and *Kaphashamaka* (by virtue of its *Rasa*, *Guna*, *Veerya*, and *Vipaka*). Thus, the overall effect of the compound drug is *Vata Pradhana Tridosha Shamaka* and hence it disintegrates the pathology of *Timira*, which is also *Vata Pradhana Tridoshaja* in its manifestation.

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.

The lipophilic action of *Ghrita* facilitates the transportation of the drug to the target organ and finally reaching the cell, because the cell membrane also contains lipid. This lipophilic nature of *Ghrita* facilitates the entry of drug into the eyeball through the corneal surface since the corneal epithelium is permeable to lipid-soluble substances and lipid-soluble substances cross the corneal epithelium irrespective of their molecular size.

Moreover, *Ghrita* preparation used in *Akshi-Tarpana* is in the form of suspension containing different particles of the drugs and the particles do not leave the eye as quick as a solution. Tissue contact time and bioavailability is more and hence therapeutic concentration can be achieved by *Akshi-Tarpana*.

This facilitates the action of drug by two ways – first by allowing more absorption of the drug by the corneal surface and secondly by exerting direct pressure upon the cornea. There may be changes in the refractive index of the cornea causing less convergence of light rays.

### Conclusion

Maximum patients were from the school-going age group and having a habit of working on computers and studying for long time, supporting the theory which states that excessive use of accommodation will lead to the development of myopia.

In few patients, even if no change in clinical refraction was observed, still the overall clarity of vision was found to be improved and asthenopic symptoms like *Netrayasa*, *Netrasrava*, *Netradaha*, etc., were remarkably reduced.

In the reduction of the dioptric power, *Jeevantyadi Ghrita* has shown better results than plain *Go Ghrita*. Newly detected cases and patients having a dioptric power less than  $-3.0$  D were found to have better results.

The duration of the treatment is short; hence, for reaching at any definite conclusion, further long-duration studies are needed. Since the study has shown interesting results, it is recommended that the study should be carried out on a large number of patients with longer duration to evaluate and analyze the results.

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## हिन्दी सारांश

## तिमिर-मायोपिया में जीवन्त्यादि घृत से अक्षि-तर्पण के प्रभाव का चिकित्सकीय अध्ययन

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मायोपिया नेत्र संबंधित एक प्रमुख व्याधि है जिसका सामाजिक, व्यक्तिगत, शिक्षा एवं आर्थिक स्थिति पर विशेष प्रभाव होता है। भारत में विभिन्न सर्वेक्षण के आधार पर अनुसारित मायोपिया ६.९% – १९.७% है। मायोपिया सतत वृद्धि वाला रोग है और इसके इलाज के तरीके उपद्रवरहित नहीं हैं। मायोपिया; शारीररचना, लक्षण और साध्यासाध्यता के आधार पर प्रथम एवं द्वितीय पटलगत तिमिर से साम्य रखता है। मायोपिया के नवीन और पुराण रूग्णों में जीवन्त्यादि घृत से अक्षि-तर्पण के प्रभाव को जानने के लिये ५४ रूग्णों (१०८ नेत्र) को पंजीकृत किया गया और स्ट्रैटीफाइड सैम्पलिंग द्वारा २ वर्गों में विभाजित किया गया। वर्ग ए में जीवन्त्यादि घृत और वर्ग बी में गौघृत द्वारा कुल मिलाकर ५ बार ५-५ दिन की अवधि के लिये अक्षि-तर्पण किया गया जिसमें प्रत्येक समय के बाद ५ दिन का अंतराल रखा गया। वर्ग ए में २२ एवं वर्ग बी में १८ रूग्णों ने चिकित्सा अवधि पूर्ण की। सांख्यिकीय परीक्षणों द्वारा प्राप्त अंकों के आधार पर वर्ग ए एवं वर्ग बी में क्रमशः ९.३०% और ५.५% नेत्रों में पूर्ण लाभ, १६.२८% और २.७८% में उत्तम लाभ एवं ३४.८८% और ११.११% लाभोन्मुख परिणाम प्राप्त हुआ।