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Research Article

AYURVEDIC INTERVENTION FOR AGE-RELATED PHYSIOLOGICAL INSUFFICIENCY OF ACCOMMODATION: CLINICAL EFFICACY OF *CHANDANADYA VARTI* AND *MADHUKADI LAUHA CHURNA*

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ABSTRACT

Shalakya Tantra, a branch of Ayurveda, emphasizes ocular health, with *Timira* classified as a progressive visual disorder. **Objective:** To evaluate the clinical efficacy of *Chandanadya Varti (Anjana)* and *Madhukadi Lauha Churna* (tablet) in the management of *Timira,* with special reference to age-related physiological insufficiency of accommodation. **Materials and Methods:** A prospective, single-group clinical study was conducted on 40 patients (80 eyes) aged 30–50 years with presbyopia. Patients received *Chandanadya Varti* applied in the lower fornices and *Madhukadi Lauha Churna* orally for 30 days, following pre-treatment *Deepana–Pachana* and *Kostha Shuddhi* protocols. Subjective parameters included blurred near vision (dim and daylight), eye strain, and headache, while objective parameters included near visual acuity and amplitude of accommodation. Outcomes were assessed using a standardized grading and scoring system, and statistical analysis was performed using the Wilcoxon Signed-Rank Test. **Results**: Post-treatment, significant improvement was observed in all subjective and objective parameters: blurred near vision in dim light (22%, P<0.001), blurred near vision in daylight (23.5%, P<0.001), eye strain (35.8%, P<0.05), headache (34.9%, P=0.007), near visual acuity (35.2%, P<0.001), and amplitude of accommodation (43.9%, P<0.001). The therapeutic effects were attributed to the antioxidant, *Rasayana, Chakshushya*, and *Tridosha*-balancing properties of the formulations. No adverse effects were reported. **Conclusion:** *Chandanadya Varti* and *Madhukadi Lauha Churna* effectively improve near vision, reduce ocular discomfort, and enhance accommodation in patients with *Timira*/ presbyopia. The treatment is safe, well-tolerated, and may serve as a promising Ayurvedic approach for age-related accommodative insufficiency.

INTRODUCTION

Shalakya Tantra, one of the eight branches of Ayurveda, deals with diseases of the organs located above the clavicle and is therefore known as *Urdhvanga Chikitsa*[1]. Among all sense organs, the eye (*Netra*) holds prime importance, as vision contributes to nearly 90% of human perception[2].

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Classical Ayurvedic texts emphasize the supremacy of vision, describing ocular disorders in detail, particularly in the *Uttara Tantra* of *Sushruta Samhita*.

Timira, classified under *Drishtigata Rogas*, is considered a *Param Daruna Vyadhi*[3] and is characterized by progressive visual disturbances such as blurred vision and difficulty in near work. The clinical features described for early stages of *Timira* closely resemble age-related physiological insufficiency of accommodation, known in modern ophthalmology as presbyopia. Presbyopia commonly manifests after the fourth decade of life and results in

difficulty performing near-vision tasks such as reading, writing, and threading a needle.

Currently, management of presbyopia in modern medicine is limited to optical correction or costly surgical interventions, which offer only temporary relief or may not be universally accessible. In contrast, Ayurveda describes both *Shamana* and *Shodhana* therapies for *Timira*, including *Netra Kriya Kalpas*. Among these, *Anjana* is considered a potent and effective ocular therapeutic procedure, especially in chronic eye disorders. Additionally, internal medications with *Rasayana* and *Chakshushya* properties help improve tissue nourishment and metabolic function.

Considering the increasing global burden of presbyopia and the limitations of existing treatment options, the present clinical study has been undertaken to evaluate the efficacy of *Chandanadya Varti (Anjana)* along with *Madhukadi Lauha Churna* in the management of *Timira* (age-related physiological insufficiency of accommodation).

AIM

To evaluate the clinical efficacy of *Chandanadya Varti (Anjana)* along with *Madhukadi Lauha Churna* in the management of *Timira* with special reference to age-related physiological insufficiency of accommodation (Presbyopia).

OBJECTIVES

1. To assess the combined therapeutic effect of *Chandanadya Varti* and *Madhukadi Lauha Churna* on subjective and objective parameters of *Timira*/ presbyopia.
2. To evaluate the improvement in near vision–related symptoms such as difficulty in reading, writing, threading a needle, and blurred near vision following treatment.

MATERIAL AND METHOD

Clinical study is a scientific study that test how well a new medical approach works in people. Each study seeks to provide scientific answers and improve methods for illness prevention, detection, diagnosis, and treatment. A new treatment may be compared to an existing treatment in clinical trials. The results obtained are crucial for the advancement of medical knowledge.

Patient Selection

This was a prospective clinical study conducted at the OPD and IPD of the Department of *Shalakya Tantra*, Rishikul Campus Hospital, UAU, Haridwar. 40 (80 eyes) with *Timira* correlating to age-related physiological insufficiency of accommodation (presbyopia) were randomly selected irrespective of sex or occupation. Patients were enrolled based on predefined inclusion and exclusion criteria after clinical evaluation. Data were recorded using a structured proforma, and clinical features were assessed using standardized criteria.

Inclusion Criteria

- Patient presenting with clinical features of *Timira* (age related physiological insufficiency of accommodation).
- Patient aged between 30 to 50 years will be selected irrespective of gender, occupation, religion and socio economic status.
- Patient having distant visual acuity 6/6.
- Patient having near visual acuity < N6.

Exclusion Criteria

- Patient having any ocular surface disease (Blepharitis, Dry Eye, Conjunctivitis, Uveitis, Strabismus, Aphakia, Pseudophakia, Amblyopia, Corneal infection, Cataract Glaucoma etc.
- Patient outside the age group 30- 50 years.
- Patient having other systemic or metabolic disorder. [HTN, DM, Thyroid]

Method of Study

Diagnostic Phase

Patients of *Timira* (age-related physiological insufficiency of accommodation) were diagnosed based on clinical symptoms, signs, and ophthalmological examination.

Diagnostic criteria included symptoms such as reduced near vision in daylight and dim light, eye strain, and headache. Clinical signs were assessed by near visual acuity and amplitude of accommodation using an RAF ruler.

Functional eye examination comprised near and distant visual acuity testing, amplitude of accommodation, torchlight examination, slit-lamp examination, ophthalmoscopy, and retinoscopy.

Laboratory investigations included Hb%, RBS, TLC, DLC, and ESR.

Drug

The therapeutic properties of *Chandanadya Varti*[4], including *Netra prasadan, Chakshushya, Netrahitam*, as well as the pharmacological effects of various alkaloids present is antioxidants that may protect eye cells against free radicles which increases with age.

The *Madhukadi Lauha Churna*[5] is a systemic formulation. The contents of *Churna* are *Triphala, Mulethi, Lauha Bhasma*. The therapeutic properties of these contents are *Rasayana, Chakshushya, Medhya, Balya*. as well as pharmacological effect of various alkaloids present is anti-oxidant.

Drug Preparation

Chandanadya Varti (ointment) and *Madhukadi Lauha Churna* (tablet) were prepared at Anamika Pharmacy, Haridwar. The raw drugs were collected and authenticated by Prof. Dr.D.C.Singh, HOD, PG Department of Dravya Guna, Rishikul Campus, Haridwar.

Chandanadya Varti was prepared by cleaning, drying, and powdering equal quantities of raw drugs, followed by extraction (*Arka*). The extract was mixed with suitable excipients (soft paraffin, liquid paraffin, and white petroleum jelly), filtered, heated, and processed into a fine paste, which was filled into sterile ointment tubes under aseptic conditions.

Madhukadi Lauha Churna was prepared in tablet form by sieving and mixing *Triphala, Mulethi*, and *Lauha Bhasma* with starch as a binding agent. The mixture was granulated, dried, compressed into tablets, and stored in airtight containers to prevent moisture contamination.

Interventional Phase

A single-group clinical study was conducted on 40 patients. All patients received *Chandanadya Varti* (ointment) and *Madhukadi Lauha Churna* (tablet) for 30 days.

Prior to the intervention, *Deepana–Pachana* was done with *Chitrakadi Vati* (2 tablets twice daily for 3 days), followed by *Kostha Shuddhi* using *Triphala Churna* (3–6 g).

Dosage

- *Chandanadya Varti*: 3 *Vidanga Matra* (30 mg), applied twice daily in the lower fornix.
- *Madhukadi Lauha Churna*: 1 tablet (500mg) orally with *Madhu* and *Ghrita* (equal amounts), followed by cow's milk after 15 minutes.

Follow-up: One follow-up was conducted **30 days after completion of treatment**.

Criteria for Assessment of Result

Grading and scoring system will be adopted for assessing each clinical feature before the commencement of trial and after completion of trial. In present research work, following clinical features are recorded and scoring has been done as given below.

Symptom	Grade -0	Grade -1	Grade -2	Grade -3
Diminished near vision in dim light	No difficulty in performing near work in dim light.	Occasional difficulty in performing near work in dim light.	Frequent difficulty in performing near work in dim light.	Continuous difficulty in performing near work in dim light.
Diminished near vision in day light	No difficulty in performing near work in day light.	Occasional difficulty in performing near work in day light.	Frequent difficulty in performing near work in day light.	Continuous difficulty in performing near work in day light.
Eye strain	After >3 hours of near work	After 2-3 hours of near work	After 1-2 hours of near work	Less than 1 hour of near work
Headache	No headache while performing near work	Occasional headache while performing near work.	Frequent headache while performing near work.	Regular headache while performing near work

Objective parameter will be assessed with the help of following scoring pattern:

1 – Near Acuity- It would be recorded as numerical convention and later converted into percentage as per method of Kaith Lyle et al., 1985. Snellen‟s test types:

Near Vision Chart Reading	Efficacy Percentage
N.6	99.6% (100%)
N.8	83.3%
N.10	66.64
N.12	49.98% (-50%)
N.18	33.32%
N.36	16.66%

2 – Amplitude of Accommodation

0	>/=5.50D
1	>5.00D
2	>3.50D – 5.00D
3	>2.50D – 3.50D
4	>1.75D – 2.50D

Overall Assessment of the Result

A) Excellent Improvement: >90% relief in symptoms and signs.

B) Marked improvement: 76% - 90% relief in symptoms and signs.

C) Moderate Improvement: 51% - 75% relief in symptoms and signs.

D) Mild improvement: 26% - 50 % relief in symptoms and signs.

E) Unchanged /no improvement: < or = 25% relief in symptoms and signs

OBSERVATION

Demographic Profile of Patients

Age-wise distribution showed that the majority of patients (56%) belonged to the 41–45 years age group. Gender-wise analysis revealed a female predominance (56%). Most patients were of Hindu religion (98%). Occupation-wise, the highest proportion were housewives (39%), while education status showed that 35% had primary-level education. A majority of patients were married (97%).

Socio-economic assessment indicated that 49% of patients belonged to the lower middle-class category. Habitat analysis revealed that 91% of patients were from urban areas. Dietary habits showed that 93% of patients consumed a vegetarian diet, and sleep assessment revealed that 72% had sound sleep. *Prakriti* analysis demonstrated that 67% of patients were of Vata-Pitta Prakriti.

Clinical Profile of Patients

Analysis of chief complaints revealed that blurred near vision was the most common presenting symptom, reported by 43 patients, followed by eye strain in 21 patients and headache in 10 patients. Assessment of distant visual acuity showed that the majority of patients (88%) were emmetropic, indicating the absence of significant distance refractive errors.

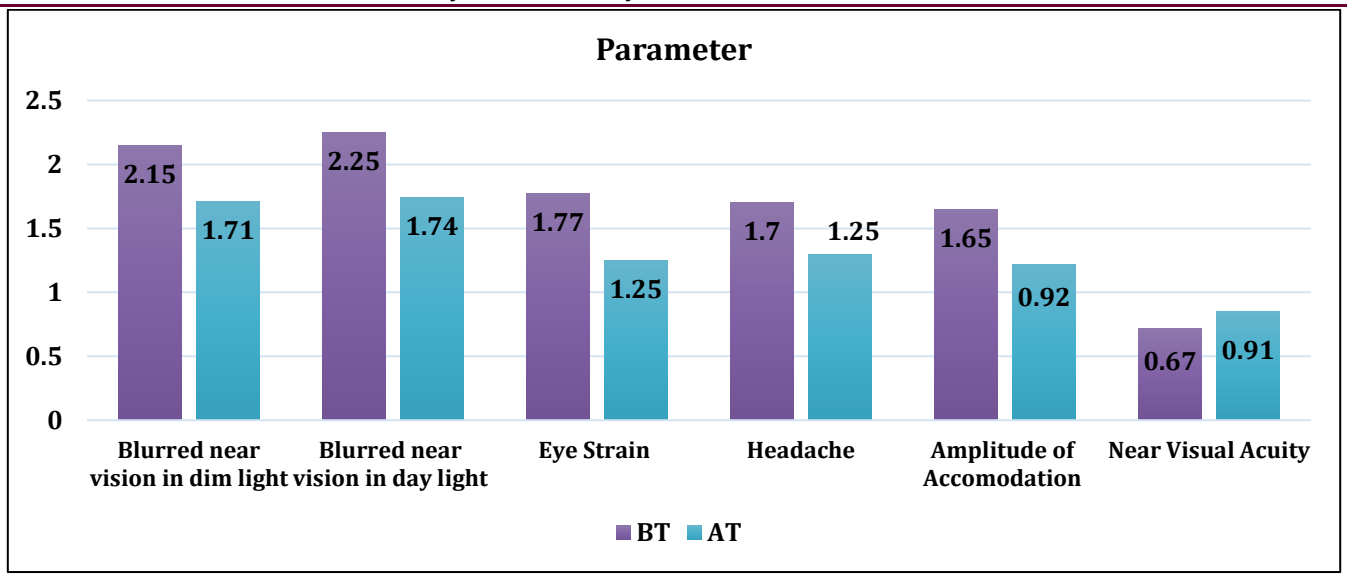
Near visual acuity assessment demonstrated varying degrees of near vision impairment. N6 with strain was observed in the maximum number of patients (37%), followed by N8 in 28%, N12 in 16%, and N18 and N36 each in 9% of patients. None of the patients had near visual acuity of N10. These findings highlight the predominant involvement of near vision consistent with age-related physiological insufficiency of accommodation**.**

Effect of Therapy

In the present clinical trial, a total of 43 patients were registered, of which 40 patients completed the treatment. As the observations were recorded on an ordinal scale, the Wilcoxon Signed-Rank Test was employed to assess the efficacy of the therapy. Statistical analysis was performed on data obtained from 40 patients (80 eyes). The clinical outcomes and effects of the intervention are presented below.

Table 1: Effect on parameter

Parameter	Mean		SD		Wilcoxon W	P-Value	% Effect	Result
	BT	AT	BT	AT				
Blurred near vision in dim light	2.15	1.71	0.863	1.05	-120	<0.001	22%	HS
Blurred near vision in day light	2.25	1.74	0.800	1.06	-136	<0.001	23.5%	HS
Eye Strain	1.77	1.25	0.685	0.910	-36.0	0.008	35.8%	Sig
Headache	1.7	1.2	0.68	0.90	-35.0	0.007	34.9%	Sig
Amplitude of Accomodation	1.65	0.92	0.921	1.12	406	<0.001	43.9%	HS
Near Visual Acuity	0.67	0.91	0.19	0.22	-5.51	<0.001	35.2%	HS



DISCUSSION

In the present study, the majority of patients (56%) were aged 41–45 years, with fewer patients in the 31–35 years (7%) and 46–50 years (21%) age groups. This aligns with previous reports indicating that the prevalence and severity of age-related physiological insufficiency of accommodation increase with age, affecting up to 80% of individuals over 40 years[6].

Gender analysis showed a female predominance (56%), consistent with prior studies where females constituted a higher proportion of presbyopic patients[7]. Most patients were of Hindu religion (98%), reflecting regional demographics. Occupationally, housewives (39%) formed the largest group, followed by businessmen (28%) and labourers (21%), highlighting the potential influence of near work and environmental exposure on early onset of symptoms.

Educational status revealed that 35% had primary-level education, while only 2% had postgraduate qualifications. The majority of patients were married (97%) and belonged to the lower middle-class (97%), with 91% residing in urban areas, likely reflecting the hospital catchment area. Dietary habits were predominantly vegetarian (97%), and 72% reported sound sleep, consistent with literature linking sleep quality to visual function[8].

Prakriti analysis showed that 67% of patients were of *Vata-Pitta* constitution, despite *Timira* being classically described as a *Vata*-predominant disorder, suggesting the influence of combined *doshic* factors in this population.

Effect of Therapy on Clinical Parameters

Blurred Near Vision in Dim Light: The mean score decreased from 2.15 to 1.71 in both eyes, showing a 22% improvement (P<0.001). This significant effect is attributed to the antioxidant properties of *Chandanadya Varti* and *Madhukadi Lauha Churna*, including Vitamin C, Chebulagic acid, and Tannin, which protect the lens from oxidative stress, enhance ocular tissue health, circulation, and accommodation. *Anjana t*herapy further improves tear film stability, corneal hydration, and meibomian gland function, while *Lauha* boosts Hb and oxygen delivery to the eyes.

Blurred Near Vision in Daylight: The mean score improved from 2.25 to 1.74, a 23.5% reduction (P<0.001). Improvement is attributed to cooling and soothing properties of *Chandan* and *Mulethi,* antioxidant effects of Vitamin C, Tannin, Guvacin, Arecolin, improved blood circulation, and enhanced ciliary muscle function. *Lauha Bhasma* supports oxygen supply to eye muscles, reducing near vision blurring.

Eye Strain: The mean score reduced from 1.77 to 1.25 (35.8% reduction, P<0.05) due to ingredients like *Triphala, Mulethi*, and *Lauha Bhasma*, which improve circulation, enhance ciliary muscle endurance, and alleviate heat-induced discomfort. Antioxidants protect the lens from oxidative damage.

Headache: Mean score decreased from 1.7 to 1.25 (34.9% reduction, P=0.007). Improvement is due to antioxidants that reduce oxidative stress, improve microcirculation, tone ciliary muscles, and enhance ocular oxygenation. *Chandana* acts as a *Pitta-shamaka*, providing soothing and rejuvenating effects.

Near Visual Acuity: Improved from 0.67 to 0.91 (35.2% improvement, P<0.001), reflecting enhanced clarity at near distances. Antioxidants protect the lens from oxidative damage that contributes to lens hardening.

Amplitude of Accommodation: Reduced from 1.65 to 0.92 (43.9% improvement, P<0.001), indicating improved lens flexibility. Antioxidants slow age-related changes in the lens caused by oxidative stress, supporting accommodation.

Mode of Action

Chandanadya Varti, composed of *Tridosha-shamak, Chakshushya, Rasayana*, and *Netrahittam* ingredients, acts as a potent rejuvenator of the *Patala*, supporting normal ocular function. When applied to the lid margins, the ointment gradually dissolves in the tear film, allowing sustained ocular and systemic absorption. Its microfine particles settle in the lower cul-de-sac, enhancing prolonged activity. Additionally, the alkaloids in *Chandanadya Varti* provide antioxidant effects, helping the eyes cope with oxidative stress and maintain lens and tissue health.

Madhukadi Lauha Churna, containing *Triphala* and *Lauha Bhasma*, acts on *Timira* by balancing *Vata* and *Tridosha* and promoting *Rasayana, Chakshushya*, *Medhya*, and *Balya* effects. *Lauha Bhasma* addresses anemia, a key factor in premature accommodative insufficiency. The alkaloids and antioxidants present in the formulation scavenge free radicals, protect ocular tissues from oxidative stress, support lens and ciliary muscle function, and contribute to overall rejuvenation and anti-aging effects.

CONCLUSION

Based on the detailed conceptual and clinical analysis, it can be concluded that *Timira* and age-related physiological insufficiency of accommodation are closely correlated conditions. The combined therapy of *Chandanadya Varti* and *Madhukadi Lauha Churna* demonstrated statistically highly significant improvements in both subjective and objective parameters. No adverse effects were observed in any patient with either *Anjana* therapy or oral *Churna,* indicating that this management is safe, effective, and well-tolerated.

REFERENCES

1. Sushruta Samhita (Ayurvedatat Vasantipika – Hindi Vyakhya) by Dr. Ambikadatt Shastri. Varanasi: Chaukhamba Sanskrit Sansthan; Reprint 2008. Su. Su. Ch. 1.10.
2. Goswami E, et al. Concept of Dwitiya Patal Gata Timira in Ayurveda with Modern Counterpart. International Ayurvedic Medical Journal. 2022; 10(5)
3. Sushrutha Samhita Vedotutpattim addhaya sutrasthan -1/17 ((Ayurvedatavanan dipika hindi vyakhya. By Ambikia datt Shastri, Chaukhamba sanskrit sansthan Varanasi, Reprint 2008).
4. Chakradatta, Ganga Vishnu, Shree Krishan dass, Netra roga adhikara Ed. 1998.Pg. 265, slokha 116.
5. Krishana Sharma, Yoga Ratnakar, Vaidyaka Grantha, Netra Roga Chikitsa, Churna Adhaya, Shloka 1-2 Page no. 434.
6. Sujata Priyambada, Premature presbyopia and its risk factor - a hospital-based study (2019).
7. Sujata Priyambada, Premature presbyopia and its risk factor - a hospital-based study (2019).
8. V. lobo et al, Free radicals, antioxidants and functional foods: Impact on human health [2010]

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