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Conceptual Study on The Add-On Effect of Bhringaraj Yastimadhu Siddha Taila Pratimarsh Nasya in Simple 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 Pratimarsh Nasya procedure with Bhringaraj Yashtimadhu Siddha Taila in fresh and old myopes. The formulation owing to its neuro nourishing, anti-inflammatory and rejuvenating properties may help in stabilising or reducing the progression of myopia when used as an adjunct to standard ophthalmic care.

Keywords: *Ayurveda, Shalakya, Bhringaraj, Yashtimadhu, Taila, Pratimarsh Nasya, Simple Myopia*

1. INTRODUCTION

Myopia or near sightedness is a common visual condition wherein distant objects appear blurred due to elongation of the eyeball or excessive refractive power of the lens-cornea system. According to the WHO, nearly 50% of the world population maybe myopic by 2050. Current management options include spectacles, contact lenses and surgical correction, all of which are symptomatic.In *Ayurveda*, diseases related to vision are classified under '*Drishtigat Rogas*'. Though myopia is not mentioned explicitly, its features resemble '*Timira*' in early stages –characterized by blurring and diminution of distant vision due to *Vata-Pitta* vitiation.*Pratimarsh Nasya* – a form of daily nasal oil administration is indicated as a preventive

therapy in classical texts for maintaining the health of Indriyas, especially *Chakshu Indriya* as visual sense organ. This paper explores the conceptual framework of using *Bhringaraj Yashtimadhu Siddha Taila Pratimarsh Nasya* as an add-on intervention in managing Simple Myopia

MYOPIA –

1. **Definition**

Myopia, commonly knowns as near-sightedness, is a refractive error of the eye where parallel rays of light entering the eye focus in front of the retina, rather than directly on it, when

accommodation is at rest.

1. **Classification**

Myopia is generally classified based on its severity and etiology:

- **By Degree:**

Low myopia: < -3.00 dioptres (D) Moderate myopia: -3.00 to -6.00 D High myopia: > -6.00 D

- **By Type:**

Simple myopia: Most common form; develops due to mismatch between the axial length of the eye and its refractive components.

Pathological (degenerative) myopia: Progressive condition associated with structural changes in the retina, choroid, and sclera.

Pseudo-myopia: Caused by spasm of accommodation; transient and reversible.

2. Etiology and Risk Factors

Myopia is a multifactorial condition with both genetic and environmental contributors:

Genetic Factors: Children with myopic parents are at higher risk

- **Environmental Influences:**
    - Excessive near work (reading, screen use)
    - Lack of exposure to natural light
    - Poor visual hygiene habits
- **Structural Changes:** Myopia is primarily due to axial elongation of the eyeball, resulting in increased axial length and altered curvature of the cornea or lens.

2. Pathophysiology

The underlying mechanism of myopia involves the disruption of emmetropization, the

process by which the eye grows to focus images accurately on the retina. In myopia, the eye grows too long or the refractive components (cornea/lens) are too strong for the eye's axial length.

Key structural findings include:

- Increased axial length
- Thinning of the retina and choroid
- Scleral remodelling and biomechanical weakening

3. Clinical Presentation

Patients with myopia typically present with:

- Blurred distance vision
- Eyestrain or headache during distance viewing
- Squinting to see distant objects clearly

4. Diagnosis

Diagnosis of myopia involves:

- Visual acuity testing
- Refraction (subjective and objective)
- Axial length measurement using optical biometry
- Retinal examination to rule out degenerative changes

5. Management Strategies

Conventional management includes:

- Optical Correction: Glasses or contact lenses
- Pharmacological Approaches: Atropine eye drops (low-dose)

- Surgical Options: LASIK, PRK, or intraocular lens implantation
- Myopia Control Interventions:
- Orthokeratology (overnight reshaping lenses)
- Increased outdoor time
- Reduced screen exposure and near work

6. Complications

High or progressive myopia can lead to serious complications such as:

- Retinal detachment
- Macular degeneration (myopic maculopathy)
- Glaucoma
- Cataract (early onset)

TIMIRA

The term *Timira* is derived from the Sanskrit root "*Tim*" meaning darkness or dimness. It denotes a progressive visual impairment that begins with difficulty in perceiving distant

objects and may progress toward partial or complete loss of vision if untreated. The disease is marked by blurred vision, difficulty in seeing distant objects, and a veil-like obstruction in the field of vision.

1. Pathogenesis (*Samprapti*)

The pathogenesis of *Timira* involves the vitiation of doshas, predominantly *Vata,*

followed by *Pitta, Kapha* or a combination. These doshas, when aggravated, localize in the *Netra* (eye) and particularly affect the *Drishti Mandala* (visual apparatus,

especially the lens, retina, and optic nerve equivalents).

2. Symptoms (Lakshana)

- Blurred vision (*drishti saithilya*)
- Visual distortion (*viparyaya darshana*)
- Difficulty in seeing distant or fine objects
- Scotomas (dark or blind spots)
- Light intolerance (photophobia)
- Loss of night vision (nyctalopia)

3. Chikitsa (Management Protocol)

The treatment of *Timira* is based on the dosha dominance and stage of disease. General principles include:

a. Nidana Parivarjana (Avoidance of causative factors)

Avoiding strain, improving sleep, and reducing exposure to screens and harsh light.

b. Shodhana Therapy (Bio-cleansing):

Virechana (purgation) for Pitta

Nasya (nasal therapy) for Vata and head-related disorders

Netra Tarpana (eye nourishment therapy)

c. Shamana Therapy (Palliative treatment):

- Use of Rasayana dravyas like Triphala, Yashtimadhu, Bhringaraj
- Ghrita preparations such as Triphala Ghrita, Jeevaniya Ghrita
- Nasya Karma with medicated oils like Anu Taila, Bhringaraj Taila

d. Rasayana and Chakshushya Herbs:

Yashtimadhu (Glycyrrhiza glabra) – anti-inflammatory, optic nerve tonic Bhringraj (Eclipta alba) – Rasayana, neuroprotective

Triphala – rejuvenates ocular tissues

BHRINGARAJ YASTIMADHU SIDDHA TAILA

BHRINGARAJ: [1]

Scientific name: *Eclipta Alba*

Family: Asteraceae

Doshaghnata: Kapha Vataghna, Netrya

RASA	Katu - Tikta
GUNA	Laghu
VEERYA	Ushna
VIPAKA	Katu
KARMA	Mitigates Vata-Kapha, Netrya

Bhringaraj (*Eclipta alba* or *Eclipta prostrata*) is a widely used herb in Ayurveda, traditionally known for its netrya (eye-strengthening), rasayana (rejuvenating), keshya (hair-promoting), and liver-supportive properties.

1. **Coumestans** - These are the primary bioactive compounds in Bhringaraj, known for hepatoprotective, anti-inflammatory, and neuroprotective properties. Key marker compound of Eclipta alba.
2. **Flavonoids** - Flavonoids provide antioxidant, anti-inflammatory, and antimicrobial effects. Reduce oxidative stress in neural and ocular tissues.
3. **Triterpenoids** - These are involved in hair growth promotion, anti-inflammatory, and immunomodulatory effects. Involved in wound healing and hair follicle stimulation.
4. **Phytosterols** - Contribute to anti-inflammatory and cholesterol-lowering actions. Also acts as a mild DHT blocker (useful in hair loss)
5. **Alkaloids** - Has antimicrobial and adaptogenic properties. Potential neuro-stimulant and insecticidal properties.
6. **Polyacetylenes** - Exhibit antimicrobial and cytotoxic activities
7. **Saponins** - Mild adaptogenic and anti-inflammatory action. May enhance the bioavailability of other phytochemicals
8. **Essential oils and Volatile Compounds** - Contribute to antifungal and antibacterial properties

YASHTIMADHU: [2]

- It is one of the Jeevaniya gana dravyas. Scientific name: *Glycirrhiza glabra* Family: Fabaceae

Doshaghnata: Vata- Pittahara, Kaphahara Chakshushya, Raktaprasadana, Varnya

RASA	Madhura
GUNA	Guru, Snigdha
VEERYA	Sheeta

VIPAKA	Madhura
KARMA	Mitigates Vata, Pitta & Rakta Doshas, Chakshushya, Balya & Varnya.

Yashtimadhu, also known as Licorice or Glycyrrhiza glabra, contains several active compounds that contribute to its medicinal properties. The major chemical constituents found in Yashtimadhu include:

1. **Glycyrrhizin**: This is the main active ingredient responsible for the sweet taste of licorice root. Glycyrrhizin is a triterpenoid saponin glycoside and is known for its anti-inflammatory, antiviral, and immunomodulatory properties.
2. **Flavonoids**: These are plant metabolites with antioxidant properties. Yashtimadhu contains several flavonoids such as liquiritin, isoliquiritin, liquiritigenin, and glabridin, which contribute to its anti-inflammatory and antioxidant effects.
3. **Coumarins**: These are aromatic compounds found in plants that have various biological activities. Yashtimadhu contains coumarins such as herniarin and umbelliferone.
4. **Triterpenoids**: These are naturally occurring organic compounds known for their diverse pharmacological properties. Yashtimadhu contains triterpenoids like

glycyrrhizinic acid and glycyrrhetinic acid, which have anti-inflammatory and antimicrobial effects.

5. **Phytosterols**: These are plant-derived compounds that have a structure similar to cholesterol and are known to have anti-inflammatory properties.
6. **Polysaccharides**: Licorice root also contains polysaccharides, which contribute to its mucilaginous properties and may have immune-modulating effects.

TEEL TAILA [3]

Scientific name: *Sesamum indicum*

Family: Pedaliaceae

Doshaghnata: *Kapha - Vatahara, Chakshushya*

RASA	Madhura
GUNA	Guru, Tikshna
VEERYA	Ushna
VIPAKA	Madhura
KARMA	Mitigates Vata and Kapha, Chakshushya

Tila Taila (Sesame oil) is one of the most revered oils in Ayurveda, known for its deep penetrating, nourishing, and tridosha-balancing properties, especially Vata-shamana. Its chemical constituents are as follows-

1. Fatty Acids - The major component of sesame oil is a mixture of unsaturated and saturated fatty acids, which determine its viscosity, stability, and therapeutic behaviour. These fatty acids exhibit emollient, anti-inflammatory, and cell-repairing properties. The balance of

omega-6 (linoleic) and omega-9 (oleic) fatty acids contributes to skin barrier repair and supports systemic tissue nourishment.

2. Lignans - Sesame oil is rich in unique phenolic lignans, which are responsible for its

stability (resistance to rancidity) and potent antioxidant activity. These lignans protect against oxidative stress, inhibit lipid peroxidation, and exhibit hepatoprotective, neuroprotective, and anti-aging effects. Sesamol, in particular, shows strong

radical-scavenging activity and is

effective in preserving cellular integrity.

3. **Phytosterols -** Tila Taila contains several plant sterols, which are structurally similar to cholesterol and have been shown to reduce cholesterol absorption and provide anti-

inflammatory effects. These compounds support cardiovascular health and also exhibit anti- inflammatory and wound-healing properties, making them useful in topical applications.

4. **Tocopherols (Vitamin E) -** Sesame oil is a natural source of Vitamin E, predominantly. These tocopherols act as potent lipid-soluble antioxidants, protecting cellular membranes and lipids from oxidative damage. They also contribute to the oil's skin-rejuvenating and anti-

inflammatory effects.

5. **Polyphenols and Phenolic Acids -** Sesame oil contains several minor polyphenolic

compounds that further enhance its antioxidant profile. These compounds offer protection against UV damage and environmental oxidative stress, supporting both dermal and ocular tissue health.

6. **Trace Minerals and Micronutrients -** These minerals act as cofactors in enzymatic reactions, support collagen synthesis, and are essential for tissue regeneration and

neurological function.

7. **Volatile Compounds (Aroma Constituents) -** These contribute to the characteristic nutty aroma, especially in roasted oil, and may play a role in its preservative and therapeutic

properties.

2. DISCUSSION

- ***Rasa*** – ***Madhur – tikta – katu*** *rasa* help in balancing *tridoshas.*
- ***Guna- Snigdha guna*** and ***guru guna*** help in *Vata-Kapha shamana.*
- ***Virya- Ushna virya*** which is Pittaghna,works as *Dahashamak & Raktaprasadan*.
- ***Vipaka*** - *Madhur Vipaka* is also *Vatapittashamak.*
- ***Karma –*** *Netrya* action of *bhringaraj, Chakshushya* action of *Yashtimadhu* along with

Chakshushya and Rasayana guna of *teel taila*

- ***Prabhava*** *:* The *Chakshushya prabhava of Bhringaraj* is well known.

So, taking into consideration all the *Rasa, Virya, Vipaka, Guna* and *Prabhav* of the ingredients of *Bhringaraj Yashtimadhu Siddha Taila Pratimarsha Nasya,*

the principal effect is mainly *Tridosha Shamak* and because of these properties vitiated *Vata, Pitta* and *Kapha* are pacified.

- The signs & symptoms of Simple Myopia are found to be very similar and can be correlated with *Timira.*
- According to *Ayurveda,* the nose is the gateway to the head—*"Nasa hi Shiraso Dwaram"*—and *Nasya* can influence the health of the sensory organs, especially vision.
- *Nasa* being the gateway of *Shira*, any drug administered through this route strikes *Shrungataka Marma* and conveys to vessels supplying *netra, shrotra, kantha,* etc thereby eliminating vitiated *doshas*

accumulated there.

- The nasal route has been considered as the fastest drug delivery route with less side effects, as nasal cavity is covered by a thin mucosa which is well vascularized.
- *Bhringaraj-Yashtimadhu Taila,* when administered via *Nasya,* travels through the nasal mucosa, reaching the cranial nerves and ophthalmic region.
- The lipophilic nature of the medicated oil enhances blood-brain barrier

permeability, facilitating the direct delivery of phytochemicals to the central

nervous system and ocular apparatus.

- Neuro-Ocular Nourishment and Rasayana Effect - Bhringaraj (Eclipta alba) is known for its netrya (eye-enhancing) and medhya (neuro-enhancing) properties.

Yashtimadhu (Glycyrrhiza glabra) is chakshushya and Rasayana in nature. These

herbs together help rejuvenate retinal tissue, strengthen the optic nerve, and restore ocular vitality, potentially slowing myopic progression.

- Antioxidant and Anti-inflammatory Action - Oxidative stress plays a key role in retinal fatigue, accommodation stress, and early scleral elongation. The

formulation provides natural antioxidants, scavenging free radicals and preventing cellular damage in ocular tissues.

- Improved Ocular Circulation (Srotoshodhana and Raktavardhana) - Nasya

stimulates the Marma points in the nasal and supraorbital regions, improving blood flow to the eye and surrounding muscles. Bhringaraj is Raktavardhaka (blood-

enriching), which may enhance choroidal and retinal circulation, supporting visual function.

- Psychosomatic Stabilization and Visual Function Support - Both *Bhringaraj* and Yashtimadhu exhibit anxiolytic, adaptogenic, and cognitive-enhancing effects.

3. CONCLUSION

Simple Myopia, a modern-day affliction aggravated by increased axial length of eyeball and environmental stressors, has been effectively correlated with the Ayurvedic condition *Timira*.

While modern treatments focus on symptomatic relief, Ayurvedic management targets the root cause by balancing the vitiated doshas and offering long-term ocular nourishment through therapies like *Nasya* with *Bhringaraj Yastimadhu Siddha Taila*.

Nasya offers a preventive approach when practiced regularly, it improves overall head and sensory organ health. It can be integrated with diet, lifestyle, and eye exercises (Trataka,

Netra Yoga) for multidimensional vision care. **Nasya Karma**, especially **Pratimarsha Nasya** with formulations like *Bhringaraj-Yashtimadhu Siddha Taila*, represents a **holistic, non- invasive, and constitutionally aligned therapy** for managing **Simple Myopia**. It nourishes, detoxifies, and rejuvenates the **head-eye-nose axis**, harmonizes **Doshas**, and supports

neurological and ocular resilience, offering a unique Ayurvedic solution for a condition that is otherwise only managed symptomatically in modern medicine

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