



EXPLORING THE ROLE OF ANJANAM (COLLYRIUM) IN SIDDHA MEDICINE FOR EYE DISEASES

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ABSTRACT

Background: Anjanam is a well-known therapeutic procedure in Siddha medicine used to prevent and manage eye problems. These days, with more people using digital devices, eye-related complaints are on the rise. This makes traditional preventive methods like Anjanam highly relevant. **Objective:** To systematically describe Anjanam based on Siddha classical literature, including its definition, types, indications, contraindications, procedure, and mechanism. **Methods:** Review important Siddha texts such as *Agathiyar Nayanavidhi*, *Nagamuni thalainoi maruthuvam*, and *Pararasasekaram*. **Results:** Anjanam involves putting herbal or herbomineral preparations on the inner margin of the lower eyelid. It is used not only for eye diseases but also for poisonous bites, delirium, and emergency conditions. The timing of application changes with the seasons according to Siddha humoral principles. The procedure uses an applicator rod moved from the inner to outer canthus, and the medicine is left in place for 5-10 minutes. **Conclusion:** Anjanam is a valuable Siddha procedure that serves preventive, therapeutic, and rejuvenative purposes. The Siddha literatures explain the detailed guidance, but further scientific validation is still needed.

KEYWORDS: Anjanam, Collyrium, Siddha medicine, Eye diseases, Mai.

INTRODUCTION

The eye is one of the five sensory organs that allow us to see. In today's world, excessive use of computers, mobile phones, and other digital gadgets has led to more eye-related problems. Constant exposure to blue light radiation hurts eye health.

Siddha medicine, which is one of South India's oldest traditional systems, has a wealth of information on eye diseases and their treatment. Classical Siddha literatures *Agathiyar Nayanavidhi*, *Nagamuni thalainoi maruthuvam*, and *Pararasasekaram* describe many

ocular disorders and their treatment. Siddhars classified the diseases affecting humans into 4448 types, among these 96 types are eye diseases. In Siddha Panchabootham theory, the eyes are ruled by Thee bootham (fire element), which makes them prone to Pitham humor imbalances.

Siddha medicine divides treatments into Internal (Aga marunthum) and External (Pura marunthum) medicine. External medicine which is specialized for eye treatments are Mai Kalikkam and Puravalaiyam. This article focuses on Anjanam (also called Mai), which

means applying herbal or herbo-mineral preparations to the inner margin of the lower eyelid. According to Panchabootham theory, Anjanam helps balance Pitham humor. Besides eye diseases, it is also used for poisonous bites, delirium, and emergency conditions.

DEFINITION OF ANJANAM

Anjanam is a procedure where herbal or herbomineral preparations are applied to the mucous membrane of both eyes. The term suggests a substance that "moves, cleans, and brings clarity to the eyes"

Other names: Mai (medicated eye salve), Collyrium.

Anjanam helps with: improving vision clarity, treating ocular diseases, enhancing ocular health, and providing

emergency care. In Siddha medicine, Anjanam works mainly by normalizing Kabham humor imbalances.

DURATION OF ANJANAM

"Vizhikalukkanj Sanamoondru Naatkoru Kaaliduvam"--
- (Pa.ku.si)

"Meiyuru Marunthae Kannil Mikunthidum Andhi Mikkaam"-Agasthiyar Nayanavidhi

Duration: 5-10 minutes

Frequency: Once every three days (preferably before dawn)

The right time for Anjanam is when deranged humors are found only in the eye, and the eye shows reduced swelling, severe itching, and not much discharge.

Tab. 1.1: Seasonal Administration Timing.

Tamil Months	English Months	Recommended Time
Aani, Iypasi, Karthikai	Mid June to Mid July, Mid October to Mid December	Early Morning
Markazhi, Thai, Maasi, Panguni	Mid December to Mid April	Mid-Noon
Chitirai, Vaikasi, Adi, Avani, Puratasi	Mid April to Mid June, Mid July to Mid October	18 Nazhikai (evening)

Note: 1 Nazhikai = 24 minutes (traditional Tamil time unit)*

Tab. 1.2: Types Of Anjanam.

Based on physical form, Siddha texts describe four types:

Type	Form	Description
Thylam	Medicated oil	Oily preparation for lubrication
Thiri	Stick/pencil form	Solid collyrium applied with rod
Mathirai	Pill/tablet form	Dissolved before use
Chooranam	Powder form	Fine powder applied with applicator

INDICATIONS

Ophthalmic: Eye diseases, Pterygium, Xerophthalmia, Cataract, Corneal ulcer, Conjunctivitis, Blepharitis, Chronic Corneal Diseases.

Systemic: Delirium(Sanni), Poison Bites, Deranged Humors, Epilepsy, And Certain Psychiatric Disorders

Anjanam helps normalize Kabham as part of a stepwise management of altered Uyirathukal (vital humors)

CONTRAINDICATIONS

Condition	Reasoning
Ocular irritation	May worsen inflammation
Post-operative conditions	Disrupts healing
Unconsciousness	Patient cannot cooperate
Immediately after eye surgery	Disrupts surgical outcome
Windy/rainy weather	Particulate contamination
After oil bath	Altered drug absorption
Following alcohol consumption	Vasodilation, increased absorption
During menstruation	Hormonal alteration
During Nasyam therapy	Route competition
After physical exertion	Elevated IOP, tear changes

THERAPEUTIC PROCEDURE

Pre-Therapeutic Procedure

1. First, explain the technique to the patient so they don't worry
2. Have the patient lie down on a bed
3. Clean the eyes with Triphala or Maramanjil decoction
4. Keep the medicated preparation (Mai) in bronze or silver vessels
5. Use an Anjana kole(applicator rod) made of lead, copper, silver, or gold

Therapeutic Procedure

1. The physician separates the eyelids gently using the left hand's index fingers
2. Apply Anjanam with the right hand over the palpebral conjunctiva, moving from the inner canthus to the outer canthus and then back
3. Repeat two or three times
4. Ask the patient to close the eyelids gently and rotate the eyeball to help spread the medicine

Removal Procedure

1. After 5-10 minutes, wash the eyes with Kudineer or lukewarm water
2. Pull the lids apart and check for drug that has settled

3. Remove any remaining particles gently with dry cotton wool

During the procedure, the patient should not blink, rub the lids, or wash the eyes.

RESULTS

1. Instrument for Anjanam

Anjanakole (Applicator Rod)

The Anjana-kole is five finger-widths long and made of copper, silver, or gold. Different metals are chosen based on the predominant humor imbalance.

Kariyakole (Special Preparation)

Take *Thippili* (*Piper longum*), Honey, Cow's Ghee, *ponnangani keera* (*Alternanthera sessilis*), *Milagu* (*Piper nigrum*), *korai-kizhangu* (*Cyperus rotundus*), Goat's Milk, Cow Urine, and the rinds of *Kadukkai* (*Terminalia chebula*), *Thandrikkai* (*Terminalia bellirica*), and *Nellikai* (*Phyllanthus emblica*). Grind all the ingredients into a paste and boil them with sufficient liquid to prepare a decoction. Melt 35 g of Lead and quench it in the decoction nine times. After the final quenching, forge the treated lead into a rod measuring 10 inches in length.

2. Medicinal preparations

2.1 Anjanam For Vatham Related Eye Disease

Ingredient	Botanical Name	Taste	Character
Thippili	<i>Piper longum</i>	Pungent	Hot
Milagu	<i>Piper nigrum</i>	Pungent	Hot (balances Tridosham)
Chukku	<i>Zingiber officinale</i>	Pungent	Hot (balances Tridosham)
Nellikai	<i>Phyllanthus emblica</i>	Sour, Sweet, Astringent	Cold

Base: Neer (water) or Kaadi (kanji)

2.2 Anjanam For Pitham related eye disease

Note: Store this preparation in a bronze vessel.

Ingredient	Botanical Name	Taste	Character
Chevelaneer (coconut water)	<i>Cocos nucifera</i>	Sweet	Cold
Kadukkai	<i>Terminalia chebula</i>	Pungent	Hot
Thandrikkai	<i>Terminalia bellirica</i>	Astringent	Hot
Maramanjai	<i>Coscinium fenestratum</i>	Bitter	Hot
PachaiKarpooram	<i>Cinnamomum camphora</i>	Salt	Cold
Nellikai	<i>Phyllanthus emblica</i>	Sour, Sweet, Astringent	Cold
Vilamichu Ver	<i>Plectranthus vettiveroides</i>	Bitter	Cold
Iruveli	<i>Vetiveria zizanioides</i>	Sweet	Cold
Adhimaduram	<i>Glycyrrhiza glabra</i>	Sweet	Cold

2.3 Phytochemical profile and active principle

Ingredient	Botanical Name	Major Active Principle	Pharmacological Activity
Thippili	<i>Piper Longum</i>	Piperine, Piperlongumine, Piperlonguminine	Anti Inflammatory, Anti Oxidant, NF-kB Inhibition
Milagu	<i>Piper nigrum</i>	Piperine, chavicine, volatile oils	Anti oxidant, anti microbial enhances bioavailability of phytochemicals
Chukku	<i>Zingiber officinale</i>	6-gingerol, 6-shogaol, zingerone	Cox inhibition, anti inflammatory, anti oxidant
Nellikai	<i>Phyllanthus emblica</i>	Emblicanin A&B, gallic acid, quercetin, ascorbic acid	Anti oxidant, anti inflammatory
Kadukkai	<i>Terminalia chebula</i>	Chebulagic acid, chebulinic acid, gall acid, ellagic acid	Anti oxidant, Antimicrobial, wound healing
Thandrikkai	<i>Terminalia bellirica</i>	Gallic acid, ellagic acid, β -sitosterol	Anti oxidant, anti inflammatory
Maramanjai	<i>Coscinium fenestratum</i>	Berberine, palmatine, jatrorrhizine	Anti microbial, anti inflammatory
PachaiKarpooram	<i>Cinnamomum camphora</i>	Camphor, cineole, terpenoids	Anti microbial
Vilamichu Ver	<i>Plectranthus vettiveroides</i>	Phenolics, sesquiterpens	Anti oxidant, cooling
Iruveli	<i>Vetiveria zizanioides</i>	Khusimol, vetiverol, vetivone	Anti oxidant, anti inflammatory

Adhimaduram	<i>Glycyrrhiza glabra</i>	Glycyrrhizin, glycyrrhetic acid, glabridin, liquiritin	Anti oxidant, anti inflammatory, mucoprotective
Chevelaneer (coconut water)	<i>Cocos nucifera</i>	Cytokinins, amino acids electrolytes	Anti-oxidant, Wound healing

Role in Ophthalmic application

Piper longum (Thippili)

Reduces ocular inflammation and oxidative stress; may protect corneal and retinal tissues through antioxidant and NF- κ B inhibitory activity.

Piper nigrum (Milagu)

Antioxidant and antimicrobial effects may help prevent ocular surface infections and reduce inflammatory damage.

Zingiber officinale (Chukku)

Anti-inflammatory and antioxidant properties may help alleviate ocular irritation and inflammation.

Phyllanthus emblica (Nellikai)

Potent antioxidant; supports corneal wound healing, protects against oxidative damage, and may improve ocular surface health.

Terminalia chebula (Kadukkai)

Antioxidant, antimicrobial, and wound-healing activities may support treatment of ocular infections and promote corneal repair.

Terminalia belliricia (Thandrikkai)

Antioxidant and anti-inflammatory properties may help protect ocular tissues from oxidative injury.

Coscinium fenestratum (Maramanjai)

Broad-spectrum antimicrobial and anti-inflammatory activities may be useful against conjunctival and eyelid infections.

Cinnamomum camphora (Panchai karpooram)

Traditionally used for cooling and antimicrobial effects; may provide symptomatic relief in external ocular applications (use cautiously due to irritation potential).

Plectranthus vettiveroides (Vilamichu ver)

Antioxidant and cooling properties may soothe irritated eyes.

Vetivera zizanioides (Vettiver)

Anti-inflammatory and antioxidant effects may help reduce ocular surface inflammation.

Glycyrrhiza glabra (Adhimadhuram)

Anti-inflammatory and mucoprotective activity may support tear-film stability and reduce ocular irritation.

Cocos nucifera (Coconut water)

Hydrating and antioxidant properties; may aid epithelial healing and ocular surface lubrication.

Mechanism Of Anjanam

Tiny particles in Anjanam build up in the cul-de-sac of the eye, which may boost their bioavailability and help absorption. Ocular absorption happens through three routes:

Corneal Route: Lipophilic components get absorbed through the cornea by a transcellular route; hydrophilic ingredients get absorbed from the conjunctiva through a paracellular pathway. Because the cornea has a lipid-water-lipid structure, lipophilic substances go through more easily.

Conjunctival Route: The conjunctiva lets hydrophilic molecules pass through more easily than the cornea, and its high vascularity helps delivery. After absorption through the conjunctiva, the sclera becomes more permeable, which helps drugs reach the ciliary body, iris, aqueous humor, lens, and vitreous humor.

Naso lacrimal Route: When Anjanam is applied, blinking increases, pushing the drug toward the lacrimal sac and then the naso lacrimal duct, finally reaching the nasal cavity. Contact with the highly vascular nasal mucosa allows rapid systemic absorption, bypassing first-pass hepatic metabolism.

Aqueous Humor Metabolism: The medication goes through the corneal epithelium (which is mostly lipophilic) and reaches the aqueous humor directly, then spreads to the eye tissues. However, some drugs that reach the aqueous humor, whether through the cornea or conjunctiva, are broken down by enzymes that are naturally present in the aqueous humor.

Factors affecting penetration: drug concentration and solubility, lipid solubility, and the amount of alkaloids in an alkaline medium.

DISCUSSION

Anjanam is a distinctive external therapeutic procedure described in Siddha medicine for the prevention and management of ocular disorders. The Siddha literatures provide detailed guidance regarding its indications, contraindications, preparation methods, administration techniques, and post-procedural care, demonstrating a well-structured approach to ocular therapeutics. The present review highlights the comprehensive nature of Anjanam and its continued relevance in the management of eye diseases.

The therapeutic effectiveness of Anjanam may be attributed to both its formulation and route of administration. The application of medicated

preparations from the medial canthus to the lateral canthus facilitates prolonged contact with the ocular surface, thereby enhancing drug bioavailability. The phytochemical constituents present in commonly used ingredients such as *Piper longum*, *Piper nigrum*, *Phyllanthus emblica*, *Terminalia chebula*, and *Glycyrrhiza glabra* possess antioxidant, anti-inflammatory, antimicrobial, wound-healing, and mucoprotective properties, which may contribute to ocular health and disease management.

The proposed mechanism of action suggests that Anjanam is absorbed through corneal, conjunctival, and nasolacrimal pathways. Lipophilic components penetrate the cornea effectively, while hydrophilic compounds are absorbed through the conjunctiva. In addition, absorption through the nasolacrimal route may allow a portion of the medication to enter systemic circulation without undergoing first-pass hepatic metabolism. This pharmacokinetic behavior may explain the traditional use of Anjanam not only in ocular diseases but also in systemic conditions such as delirium, epilepsy, and poisonous bites.

Another noteworthy aspect is the Siddha principle of tailoring formulations according to humoral imbalances. Preparations containing Ushna Veeriyam (hot potency) ingredients are recommended for Vatham-related eye disorders, whereas Sheeta Veeriyam (cold potency) ingredients are preferred for Pitham-related conditions. This individualized therapeutic approach reflects an early concept of personalized medicine within the Siddha system.

Despite its extensive traditional usage and strong theoretical basis, the scientific evidence supporting Anjanam remains limited. Rigorous pharmacological studies, toxicity assessments, standardization of formulations, and well-designed clinical trials are required to validate its efficacy and safety according to contemporary ophthalmological standards. Such investigations would help integrate traditional knowledge with modern evidence-based practice.

CONCLUSION

Anjanam is a unique and valuable therapeutic procedure in Siddha medicine with preventive, curative, and rejuvenative applications in ocular healthcare. Classical Siddha literature provides detailed descriptions regarding its preparation, indications, contraindications, seasonal administration, and therapeutic application. The formulation-specific approach based on Vatham, Pitham, and Kabham imbalances reflects a sophisticated individualized treatment strategy. Furthermore, the proposed mechanisms of ocular and systemic absorption offer a scientific rationale for its traditional use in both eye diseases and selected systemic conditions. However, further experimental and clinical research is necessary to establish its efficacy, safety, and therapeutic role in

modern ophthalmology while preserving the rich heritage of Siddha medicine.

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