



Review Article

ASSESSING THE EFFICACY OF *SNEHA POTTANAM* (BUNDLE APPLICATION) IN MANAGING *VATHA* RELATED DISEASES IN CHILDREN

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ABSTRACT

The Siddha system of medicine offers a holistic approach that addresses not only physical ailments but also the spiritual well-being of individuals. It classifies 4,448 types of diseases and categorizes treatments into two types: internal and external medicines. *Pottanam* is one of the treatment methods described by Siddhar Therayar in his text '*Therayar Tharu*'. Managing special needs children has become a significant challenge today. *Sneha Pottanam*, an external therapy mentioned in '*Pillaipini Vagadam - Part 2*', is particularly used for managing *Vatha*-related disorders in pediatric cases. **Aim & Objective:** The aim of this review is to elaborate the efficacy of *Pottanam* (bundle application) and to evaluate the therapeutic efficacy of *Sneha Pottanam*, as described in '*Pillaipini Vagadam - Part 2*', for the management of *Vatha*-related diseases through a comprehensive literature review. **Materials & Methods:** The review was conducted through Siddha literature, including '*Pillaipini Vagadam - Part 2*', '*Gunapadam*', '*Pathartha Gunachinthamani*', the 'Manual of Siddha External Therapy', as well as research articles from Google Scholar and PubMed. **Discussion:** Siddha literature describes a wide range of external therapies, with *Pottanam* being a simple yet effective treatment for managing spasticity in *Vatha*-related diseases and balancing the three humors. This therapy rejuvenates the body and stimulates nerve endings. The ingredients in *Sneha Pottanam* act intradermally, making it an excellent remedy for special needs children by enhancing the function of motor and sensory receptors. **Conclusion:** The pharmacological properties and phytocomponents of *Sneha Pottanam* are highly effective in managing spasticity in special children and balancing the elevated *Vatha* humor. This review supports further studies on the ingredients of *Sneha Pottanam*, which could aid in the management of neurological disorders caused by imbalances in the body's three humors.

INTRODUCTION

The Siddha system of medicine offers a holistic approach that addresses both physical ailments and spiritual well-being. It classifies 4,448 disease types, providing detailed explanations of their pathology, causes, symptoms, and treatment methods, along with preventive measures. Siddha treatment is divided into two main categories: *Aga Maruthuvam* (internal medicine) and *Pura Maruthuvam* (external medicine), each further classified into 32 types^[4].

Pottanam, one of the external therapies, has been used as a home remedy since ancient times. This simple procedure is employed to balance the body's increased humors, as described by Siddhar Therayar in his text *Therayar Tharu*.


AIM AND OBJECTIVE

To determine the effectiveness of *Sneha pottanam* in managing *Vatha*-related conditions in children through a review of Siddha literature.^[1]

To elaborate the efficacy of Siddha external therapy *Pottanam* (Bundle application).

MATERIALS AND MEHODS

Pottanam, an external therapy, elaborated extensively in the "Manual of Siddha External Therapies," covers its indications, contraindications, timing, and scientific validation. *Sneha pottanam* is

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specifically noted in Siddha literature, including "Pillaipini Vagadam Part-2," for the management of Vatha diseases. A review was conducted using Siddha texts such as "Pillaipini Vagadam," "Gunapadam," "Pathartha Gunachinthamani," the "Manual of Siddha External Therapies," and research articles from Google Scholar and PubMed.

Literature Review for Pottanam^[5]

Definition

Pottanam is a technique involving medicated powders placed in a cloth bundle, which is then securely tied and applied to the affected areas. It can also be used by soaking the bundle in a medicinal liquid before application. This method may also induce sweating at the treatment sites and is alternatively known as a medicated pouch or bundle formation.

Purpose of Pottanam

- To ensure patient comfort and freshness.
- To enhance circulation.
- To provide immediate pain relief.
- To reduce fat.
- To improve skin texture and softness.
- To decrease inflammation and coagulation.
- To manage unwanted growth.
- To alleviate prolapse.
- To control or stop bleeding.
- To open skin pores for sweat and sebum.
- To normalize *Vali kutram*

Types of Pottanam

According to the physical nature it is classified as

- Dry powder bundle pack
- Liquid dipped bundle pack

Procedure for Pottanam Administration

Pottanam is a technique involving the application of a medicated bundle, either pre-prepared or freshly made medicated bundle applied, to natural body openings or affected areas to induce sweating. The procedure typically involves three steps: grinding dried herbs into a powder, placing the powder in a cloth bundle, soaking the bundle in a hot decoction or oil, and then applying it to the targeted area for a few minutes to stimulate perspiration.

Appropriate Therapy Timings

The ideal time to apply *Pottanam* is between 6:00 AM and 5:00 PM.

Procedure:

1. Preparation

- Purify the required drugs.
- Grind or pulverize them into a powder.
- Place the powder on a cloth, bundle it, and tie it securely.

- Prepare the bundle for administration, either by dipping it into hot oil or decoction.

2. Administration

- Gather all necessary items at the bedside in the therapeutic room.
- Ensure the bundle is sufficiently hot.
- Ask the patient to urinate before starting.
- Remove any metal jewelry, hearing aids, contact lenses, and eyeglasses.
- Instruct the patient to drink 500-700 ml of water before the treatment begins.
- Check that vital signs are normal.
- Explain the procedure to the patient.
- For application in natural openings, ensure the mouthpiece is properly tied and facing outwards.
- For application on the skin, verify the bundle's effective heat.
- Position the patient comfortably, either sitting or lying (supine, prone, or lateral).
- Record the number of bundles used.
- Apply the bundle for 10-15 minutes.
- Allow the patient to rest for 5 minutes.
- Wipe away sweat with a dry towel.
- Have the patient rest in a separate room for 15 minutes.

Indications for Pottanam

- Cervical spondylosis
- Convulsions
- Delirium
- Ear ache
- Eye diseases
- Fever
- Head ache
- Measles
- Nervous disorders
- Prolapse
- *Tridhosam*

Contraindications for Pottanam

- Highly infectious diseases
- Pregnancy
- Tuberculosis

Scientific Validation of Pottanam

The process during therapy

- Cleans surface impurities.
- Protects body openings from toxins.
- Removes dead cells.
- Stimulates nerve endings.
- Enhances the function of motor and sensory receptors.

- Boosts peripheral circulation and accelerates the healing process.
- Mobilizes fat due to the extra heat.
- Relaxes muscles.
- Controls bleeding.
- Enhances immunity, vitality, and longevity.
- The medicated aerosol released from the bundle during sweating helps control germs.

Literature Review about Sneha Pottanam

Name of the Ingredients	Botanical Name	Parts Used
<i>Amanakku</i>	<i>Ricinus communis</i>	Seeds
<i>Veppa muthu</i>	<i>Azadirachta indica</i>	Seeds
<i>Kazharchi paruppu</i>	<i>Caesalpinia bonduc</i>	Seeds
<i>Kopparai thengai</i>	<i>Cocos nucifera</i>	Solid albumen (pulp)
<i>Pungan vidhai</i>	<i>Pongamia pinnata</i>	Seeds
<i>Kadugu</i>	<i>Brassica nigra</i>	Seeds
<i>Velvengayam</i>	<i>Allium sativum</i>	Bulb
<i>Perungayam</i>	<i>Ferula assa-foetida</i>	Resin
Oils Used		
<i>Amanakku ennai</i>	<i>Ricinus communis</i>	Oil
<i>Nal ennai</i>	<i>Sesamum indicum</i>	Oil
<i>Pungan ennai</i>	<i>Pongamia pinnata</i>	Oil
<i>Veppa ennai</i>	<i>Azadirachta indica</i>	Oil
<i>Iluppai ennai</i>	<i>Madhuca longifolia</i>	Oil

Review About Ingredients of Sneha Pottanam as per Siddha Literatures^[2]

***Amanakku (Ricinus communis)*²**

Vathath thodakkai varavotta marpadikuk
Kadha thuk kappar kadiyume – soodhathai
Perandap pandikkum pedhikku noikkattai
Yeranda monpadhini ye.

✚ It cures *Vatha* diseases.

Action: Anti-vatha

***Veppa muthu (Azadirachta indica)*²**

Vembin vidhaikku vidasanni padhamudhal
Thembivilun thodumenath ther..

✚ It removes toxins *from the body*.

Action: Anthelmintic

***Kazharchi paruppu (Caesalpinia bonduc)*²**

Kosanch churukkang kudilamigu mannavanal
Veesanch churungadhu melitta – mosam
Oliya marundhagi yothasai seiyum
Suzhala giyakazharchik kai.

✚ It cures swelling which occurs due to deranged *Vatham*

Action: Anti-spasmodic, Tonic

***Kopparai thengai (Cocos nucifera)*²**

✚ It is used to extract oil which is used for cooking and hair nourishment as external application.

Action: Nutritive

Fig.No.1.Amanakku



Fig.No.2.Veppa muthu



Fig.No.3.Kazharchi paruppu



Fig.No.4.Kopparai thengai



Pungan vidhai (*Pongamia pinnata*)²

Punginvidhai karkirandhi punnkarappan kadheluchi
angasanni kannnoikkum ambedhi – yungkattum
kattupung ginvidhaikku kandathe marsorime
poottupan ginvaivum pom.

✚ It cures the deranged *Vatham* which affects the joints.

Action: Alterative, Astringent

Kadugu (*Brassica nigra*)²

Idikasa nasiksoo reelaikabam pithang
kadivadha seedhang kadupo – udalir
padukottu noiyennum pangivaika laipunn
kadukottu menmarundhu kaan.

Mandhamayak kamvadham vainer sulatraluru
mundhu sugapirasa vangalunda – mindhunudhan
Mane! Kiranikunma marumuth thodamumpom
thane kadugirku than.

✚ It cures *Vatha* diseases and thickness of saliva.

Action: Stimulant, Diuretic

Velvengayam (*Allium sativum*)²

Sanniyodu vadhan thalainovu thalvali
mannivaru neerkovai vanseedham – anname!
ullulli kannpaai ulaimoola rogamum pom
vellulli thannal verundu.

✚ It cures *Vatha* diseases, head related diseases

Action: Stomachic, Tonic

Perungayam (*Ferula asafoetida*)²

Thanthave thantha moolathelumpini
saruvakalam viruchigankeedamma
mandhamvadham udhavartham alkulnoi
marpanangatta kunmam magodharam
undhu gerpathin vithiranj soolaichoor
udhirapoochi silethumathurum vali
vanthamei kadupp odivai muttrume
mayunarunar kayang kidaikine.

✚ It cures *Vatham*, pain due to exaggerated *Kabam*, body pain.

Action: Stimulant, Anti-spasmodic, Diuretic.

Amanakku ennai (Castor oil)³

Amanakku neia nalamunda miyavarkkum
Poomanakku meni purikuzhale - vaimanakkak
Kollil vaiyiravidun koramulla vayuvaru
Mullilvaru kunmampo mor..

✚ It cures *Vatha* diseases.

Nal ennai (Sesame oil)³

Pudhi nayanakulirchi porippu meipugalanj
Sathuvan gandhi thaniyilamai – methavundan
Kannoi sevinoi kabala azhal kasa noi
Punnoipo mennaipar pottru.

✚ It develops the intellectual clarity and reduces the
excessive heat of brain.

Fig.No.5.Pungan Vidhai



Fig.No.6.Kadugu



Fig.No.7.Velvengayam



Fig.No.8.Perungayam

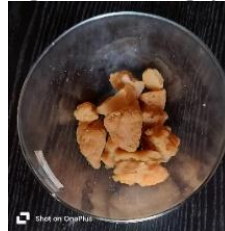


Fig.No.9.Amanakku ennai

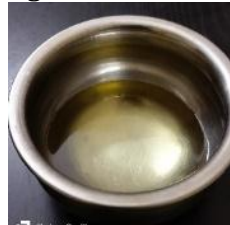


Fig.No.10.Nal ennai



Pungan ennai (Karanja oil)³

Angamazha kidumverpam pungennei thanakkukth
thangampor gandhiyathu thanundan – thinganmuga
mane karappanpom vansori yunjirangun
thane vilagumena saatru..

✚ Enhance the skin tone similar to gold.

Veppa ennai (Neem oil)³

Vadhampom pithamigu marak kirandhiyodu
Medhukara ppansirangu munnisavum – odhudalin
Nappa nurusuramu nadusanniyun tholayum
Veppanei yendorrukaal vil.

✚ It cures *vatha* diseases.

Iluppai ennai (Mahua oil)³

Karappanadarung kadi sirangu punnu
Murappa midupulli yodu – karappan
Pagumozhi madhe balamundan dhurpalam
Pogumilu ppainei ke..

✚ Strengthen body

Fig.No.11.Pungan ennai



Fig.No.12.Veppa ennai



Fig.No.13.Iluppai ennai



Phytochemicals and Pharmacological Activities of Ingredients used in Sneha Pottanam

Ingredients	Phytochemicals	Pharmacological activity
Amanakku	Steroids, saponins, alkaloids, flavonoids, glycosides. Seeds contain 45% fixed oil with ricinoleic acid, isoricinoleic acid, stearic acid and dihydroxystearic acid and alkaloid ricinine.	Antioxidant, antinociceptive, immunomodulatory (in vitro), anti-inflammatory ^[6]
Veppa muthu	Contain quercetin, azadirachtin, number of limonoids, nimbosterol in different parts of plants.	Antioxidant, anti-inflammatory, neuroprotective, immunomodulatory ^[7]
Kazharchi paruppu	Steroidal saponin, fatty acids, hydrocarbons, phytosterols, isoflavones, aminoacids and phenolics.	Antioxidant, anti-inflammatory, immunomodulatory, antispasmodic, muscle contractile activity ^[8]
Kopparai thengai	The constituents of solid albumen (pulp) of coconut were identified as vitamin B, nicotinic acid (B3), pantothenic acid (B5), biotin, riboflavin (B2), folic acid with trace elements of Vit B1, B6, C, pyridoxine, thiamine, folic acid, amino acid, growth promoting factors.	Analgesic, anti-inflammatory, antioxidant ^[9]
Pungan vidhai	Karangin, kaempferol, kanugin, alkaloids, tannin, saponin, quercetin, pongamol, neoglabrin	Antioxidant, anti-inflammatory, anti-convulsant ^[10]
Kadugu	Alkaloids, flavonoids, glycosides, carbohydrates, sinapine, myrosin, sinigrin, inositol, albumins, gums and coloring matters. Phenolic compounds like gallic acid, quercetin, ferulic acid, caffeic acid and rutin determined by HPTLC.	Antioxidant, anti-inflammatory, anti-epileptic ^[11]
Velvengayam	Contains hundreds of phytochemicals including sulfur-containing compounds such as ajoenes, thiosulfates, vinyl dithiols-1, 3-dithiol, sulfides, disulfides, diallyl trisulfide and others that accounted 82% of overall garlic sulfur content.	Antioxidant, anti-inflammatory.
Perungayam	Contain ferulic acid, umbelliferone, vanillin, luteolin, valeric acid, azulene, glucuronic acid etc.	Anti-inflammatory, nervine stimulant, antispasmodic, sedative, immunostimulant, antioxidant ^[12]

Amanakku ennai	The GLC study of castor oil showed the presence of ester form of palmitic acid (1.2%), stearic (0.7%), arachidic (0.3%), hexadecenoic (0.2%), oleic (3.2%), linoleic (3.4%), linolenic (0.2%), ricinoleic (89.4%) and dihydroxy stearic acids.	Antioxidant, anti-inflammatory, bone regeneration efficacy ^[14]
Nal ennai	Sesamin, sesamol, asarinin	Antioxidant, neuroprotective ^[15]
Pungan ennai	Karanjin, pongamol, glabrachalcone, kanjone, pongapin.	Antioxidant, anti-inflammatory ^[16]
Veppa ennai	Nimbin, nimbidin, nimbolide, gedunin	Anti-inflammatory, anti-arthritic ^[17]
Iluppai ennai	Flavanoids, triterpenoids	Anti-inflammatory, analgesic, antioxidant ^[18]

Procedure for Preparation of Sneha Pottanam

The ingredients of *Sneha pottanam Amanakku vithai*, *Veppam vithai*, *Kazharchi paruppu*, *Kopparai thengai*, *Perungayam*, *Velvengayam*, *Pungan vithai* are purified according to purification methods mentioned in *Sikittha Rathna Deepam* and grinded into a coarse powder and finally made it into a medicated pouch.

This medicated pouch is dipped in the five oil containing *Amanakku ennai*, *Iluppai ennai*, *Pungan thylam*, *Veppa ennai* and *Nal ennai* which is heated and apply it as fomentation.

Fig.No.14. Ingredients of Sneha Pottanam



Fig.No.15. Medicated pouch of Sneha Pottanam



Fig.No.16. Five oils used in Sneha Pottanam



DISCUSSION

The mechanism of fomentation offers substantial therapeutic benefits through heat application and the stimulation of various physiological responses. Its diverse impacts are as follows:

Connective Tissue: Applying heat reduces viscosity and joint stiffness, enhances tissue extensibility, and improves range of motion, which is particularly beneficial for conditions with joint stiffness and limited mobility^[13]

Muscle: Localized heat fosters an angiogenic environment that improves muscle strength and aids healing by increasing blood flow to the affected area.^[13]

Sweat Glands: Stimulating the anterior hypothalamus boosts sweating, which helps eliminate toxins, waste metabolites, and excess water, contributing to overall health and balance.

Membrane: Heat's analgesic effect is mediated through the activation of transient receptor potential (TRP) vanilloid 1 receptors in the brain, enhancing muscle relaxation and flexibility while managing pain.^[13]

Skin: Heat application activates proprioceptors, which assist in detoxifying the body and blocking pain signals

from reaching the spinal cord and brain. It also promotes channel dilation for better cleansing.

Nerve: Heat activation of thermoreceptors aids in pain relief by blocking the pain signal process, contributing to antinociception.^[13]

Sneha pottanam, a liquid-dipped bundle application, includes ingredients with anti-inflammatory, antioxidant, immunomodulatory, neuroprotective, muscle contractile, and sedative properties. These effects align with the described mechanisms, indicating that *Sneha pottanam* can effectively manage *Vatha*-related diseases by stimulating nerve endings and improving peripheral circulation. Scientific validation of its ingredients supports its potential in enhancing motor and sensory receptor functions. Siddha literatures such as *Gunapadam Mooligai*, *Pathartha Guna Chinthamani* also states that the ingredients of *Sneha Pottanam* have the efficacy to cure *Vatha* diseases. Further research into the specific components and oils used in *Sneha pottanam* could provide deeper insights into its therapeutic benefits and lead to more effective management of *Vatha*-related conditions.

CONCLUSION

The application of heat through fomentation offers a range of therapeutic benefits across various body systems, including connective tissue, muscle, sweat glands, skin, and nerves. These benefits are attributed to mechanisms such as reduced viscosity, enhanced blood flow, increased sweating, and activation of pain-regulating pathways. The *Sneha pottanam*, with its combination of anti-inflammatory, antioxidant, and muscle-relaxing properties, aligns well with these mechanisms. Its application may have potential effect in managing *Vatha*-related diseases by improving peripheral circulation and sensory functions. Continued research into the specific ingredients and their effects may enhance our understanding and therapeutic use of *Sneha pottanam*, contributing to more effective treatments for *Vatha* related conditions.

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