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#### "A REVIEW ON SNEH KALPANA W.S.R. TO ARK TAIL FOR EXTERNAL APLLICATION"

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#### **ABSTRACT:**

Sneh Kalpana, a foundational pharmaceutical process in Ayurveda, involves the preparation of medicated lipid-based formulations using Ghrita (ghee), Taila (oil), Vasa (muscle fat), or Majja (bone marrow) as the base. Among the four types of Snehas, Ghrita (clarified butter) and Taila (oil) are most commonly used. These formulations are designed to extract and deliver lipid-soluble bioactive components of medicinal herbs, enhancing their absorption, bioavailability, stability, and shelf life. This review explores the classical methodology of Sneh Kalpana, with a specific focus on its application and the therapeutic potential of Arka Taila, a medicated oil traditionally used in the treatment of various dermatological disorders. The article discusses the stages of preparation of sneh kalpana and significance of Sneh Murchana. Sharangadhara Samhita, Bhaishajya Ratnavali, and Yogaratnakara cite Arka Taila for conditions like eczema (Vicharchika), scabies (Pama), and itching (Kandu), as well as earaches (Karna Shula). The oil's therapeutic effects-anti-inflammatory, antimicrobial, and wound-healing—are attributed to its pungent and bitter taste (Rasa), laghu and tikshna Guna, and Ushna Virya, which aid in balancing aggravated Vata and Kapha doshas. The review highlights the integration of ancient Ayurvedic principles with contemporary therapeutic needs, establishing Sneh Kalpana, and particularly Arka Taila, as effective, safe, and versatile options for topical management of skin disorders. The detailed insights into its preparation, pharmacology, and clinical efficacy reinforce its relevance in Modern and Ayurvedic practiceNational Journal of Avurveda & Yoga

**KEY WORDS:-** Sneh Kalpana, Sneh Murchana, Arka Taila, Ayurvedic pharmaceutics, Topical application

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#### **INTRODUCTION**

Ayurveda is an ancient Indian medical system that promotes holistic health by fostering balance among the body, mind, and spirit. It relies on natural methods to prevent and treat diseases. Bhaishajya (Medicine) is kept in second position among the Padchatushtya because it has great role in treatment. Ayurvedic medicines are based on plants, animals extract and minerals both in single ingredient drugs and compound formulations. Ayurvedic compound formulations are mainly divided into two groups viz. Kasthausadhi (Herbal) and (2). Rasausadhi (Herbo- mineral). <sup>(1,2)</sup> In Ayurveda, there are five basic methods (kalpanas) for preparation of medicine i.e. Swarasa (juice), Kalka (paste of herbs), Kwatha (decoction), Hima (cold infusion) and Phanta (hot infusion) known as Panchavidha Kashaya Kalpana. All kalpanas are mainly based on water content or water soluble part. Since Panchvidh kashay kalpana has short duration of expiry. The formulations which can be preserved for long term and can be administered conveniently is mentioned in Samhitas as Churna, Vati, Leha, Sneha and Sandhan.<sup>3</sup>

**Sneh Kalpana** Consist of two words Sneh-Fat/Fatty Material, Kalpana- Pharmaceutical Process of Medicine. Sneh Kalpana is a pharmaceutical process in which the active ingredients of a drug are absorbed into a lipid-based medium (Sneha), allowing for both internal and external therapeutic application. In Ayurvedic pharmaceutics, four types of Sneha Dravyas (lipid-based media) are utilized: Ghrita (ghee), Taila (oil), Vasa (adipose tissue or muscle fat), and Majja (bone marrow), each selected based on the therapeutic requirements of the formulation. Among the four types of snehas, Ghrita (clarified butter) and Taila (oil) are most commonly used. Ghrita is the best among chaturvidh sneha.

## AIM OF SNEH KALPANA

- To extract the lipid-soluble active constituents from medicinal substances (drugs).
- To utilize the therapeutic properties of ghee (Grita) or oil (Taila) as vehicles (anupana) in the formulation.
- To improve the stability and extend the shelf life of Sneha-based preparations.
- To enhance the bioavailability and absorption of the active pharmaceutical ingredients.
- To improve the organoleptic properties of the formulation, including taste and aroma, thereby increasing patient compliance.<sup>(4,5)</sup>

**General Method of Preparation of Sneh Kalpana** - The process is based on the Siddha Sneha Lakshana, i.e., the characteristics of a properly prepared medicated oil or ghee. The general method involves the boiling of herbal paste (Kalka), liquid (Drava), and fat (Sneha Dravya) together until the desired characteristics are obtained.

Ingredients Required- Sneha Dravya (Fat base): Taila (e.g., Mustard oil, Sesame oil) or

Ghrita (ghee or clarified butter), **Kalka** (Herbal paste). Finely ground paste of the prescribed herbs **Drava Dravya** (Liquid medium): Decoction (Kashayam), juice (Swarasa), or other liquid forms of drugs. **Standard Ratio** : Kalka : Sneha : Drava = 1 : 4 : 16

**Preparation of Kalka**: Take fresh or dried herbs and grind them with a small amount of water to make a smooth paste. **Mixing**: Mix the Sneha (fat), Kalka (herbal paste), and Drava (liquid) in a wide-mouthed vessel (usually made of stainless steel or copper lined with tin). **Heating**: Heat the mixture gently over a moderate fire. Stir continuously to prevent charring or sticking at the bottom. Maintain the temperature to avoid foaming or overheating. **Observation**: Continue heating until all moisture content evaporates and only the medicated fat remains. Use **Siddha Lakshanas** (tests for completion), such as: Absence of froth or sound (indicates water has evaporated). Kalka forms a Varti (wick) without cracking. Medicated Sneh when dropped in water should not crackle. The smell, color, and taste change appropriately. Filtration: Filter the hot oil through a muslin cloth to remove residues. Collect and store in a clean, dry, airtight glass or plastic container. The whole process of Paka should be carried out on a mild to moderate flame. Store in a cool, dry place away from sunlight.

Three **Stages of Paka** are specified for therapeutic purposes. **a. Mrudu Paka**: In this stage, the Kalka looks waxy and when rolled between fingers, it rolls like lac without sticking. The Taila obtained at this stage is used for Nasya [Nasal instillation]. **b. Madhyama Paka:** In this stage, the Kalka becomes harder and rolls in to Varti. It burns without crackling sounds when exposed to fire and Phena [Froth] will appear over the Taila. Taila obtained at this stage is used for P<sub>i</sub>na [Internal administration] and Basti [Enema]. **c. Khara Paka:** Further heating of the Taila, leads to Khara Paka. Kalka becomes brittle when rolled in between fingers. The Taila obtained at this stage is used only for Abhyangya or Karnapurana.[External application].

The period of Paka depends upon the nature of liquid media used in the process. National Journal of Avurveda & Yoga

**Shelf life**: The shelf life - date of expiry of any medicated Grita or Tail is sixteen month or it can be determined on the basis of scientific data, Ghrita 2 years Taila 3 years on basis of the nature of liquid media used in the process.

**Applications of Sneh Kalpana**- Internal Use (Pana) – e.g., Brahmi Ghrita, used for cognitive function. External Use (Abhyanga, Nasya, Basti,Lepa) – e.g., Mahanarayana Taila for massage, Ark Tail for dermal application or Karnapurana.<sup>(6,7,8)</sup>

**Sneh Murchana -** Sneh Murchana is a preliminary process done before the preparation of **Sneha Kalpana** (medicated oil or ghee) to purify and stabilize the Sneh base (Taila or Ghrita). The term "Murchana" means detoxification or refinement of Sneha Dravya to enhance its medicinal qualities and shelf life.

#### Purpose of Sneh Murchana-

1. Removes impurities, bad Odor, and undesirable properties from the oil or ghee.

- 2. Improves absorption, taste, smell, and colour.
- 3. Prevents early rancidity or spoilage.
- 4. Enhances the therapeutic efficacy of the Sneha.

**General Ingredients for Murchana of Sneha -** Based on classical texts (like **Sharangadhara Samhita**), the herbs commonly used for Murchana of **Taila** or **Ghrita** are:

- Haridra (Turmeric) Anti-inflammatory, antioxidant
- Haritaki (Terminalia chebula) Detoxifying
- Amalaki (Emblica officinalis) Antioxidant, rejuvenating
- Bibhitaki (Terminalia bellirica)- Anti-inflammatory, Antibacterial
- Mustaka (Cyperus rotundus) Digestive, anti-spasmodic
- Lodhra (Symplocos racemosa) Astringent
- Manjistha (Rubia cordifolia) Blood purifier
- Chandana (Santalum album) Cooling, aromatic

These herbs vary slightly depending on whether **Ghrita** or **Taila** is being murchita (processed).

**Procedure for Sneh Murchana- Prepare a decoction (Kashaya)** using the selected Murchana herbs. **Take Sneha Dravya (Oil or Ghee)** in a wide vessel. Add the **herbal decoction** and a small amount of **Kalka** (paste of some herbs). **Heat the mixture** over a mild flame with constant stirring. Continue heating until **all moisture evaporates** and only the **purified Sneha** remains. Filter the final product and **store** it.

According to the Bhaishajya Ratnavali the process of Murchana (refining) of Sneha (medicated oils or ghee) involves specific proportions of Kalka (herbal paste), Sneha (oil or ghee), and Drava Dravya (liquid medium). National Journal of Ayurveda & Yoga

#### Proportions for Murchana of Sneha

Drava Dravya (Liquid Medium)				Kalka Quantity (Relative to Sneha)
Jala (Water)				1/4th
Kwatha (Decoction)				1/6th
Swarasa (Herbal Juice)				1/8th
Godugdha	(Milk),	Dadhi	(Curd),	1/8th + 4 parts Jala
Mamsarasa	(Meat	Juice),	Takra	
(Buttermilk)				

These proportions are considered to optimize the extraction and potency of the medicinal properties of the herbs used in the preparation of Sneha.

Signs of Proper Murchita Sneha – a. Clear, bright oil or ghee b. Free from froth, odor, or stickiness c. No unpleasant smell d. Longer shelf life.<sup>(9-12)</sup>

#### Sneh Kalpana Ark Tail For External Application :

Sneha kalpana, a classical Ayurvedic pharmaceutical procedure, has been effectively employed for centuries in the management of various neurological and dermatological disorders. This therapeutic modality involves the processing of medicinal substances into lipid-based formulations, primarily using ghee (ghrita) or oil (taila) as vehicles.

In the context of dermatological conditions, the selection of specific medicated oils is determined based on the nature, aetiology, and severity of the disease, as well as the patient's Prakriti (constitutional type) and Doshic imbalance. These medicated oils, prepared through meticulous procedures outlined in Ayurvedic texts, are known to facilitate transdermal absorption of bioactive compounds, exerting anti-inflammatory, antimicrobial, and immunomodulatory effects.

The targeted use of these lipid-based formulations in Sneha kalpana not only aids in restoring skin integrity and function but also contributes to systemic detoxification and the pacification of aggravated doshas, particularly pitta and vata, which are commonly implicated in skin disorders.

One of the effective formulations under the classical Ayurvedic category of Snehakalpana for topical (dermal) application is **Arka Taila.** This medicated oil is referenced in several authoritative Ayurvedic texts with variations in nomenclature and specific indications:

- Sharangadhara Samhita (Taila Prakarana, ) refers to the formulation as Arka Taila.
- Bharat Bhaishajya Ratnakar (Akaradi Taila Prakarana) lists a similar preparation under the name Arka Patra Rasa Tailam. Ayurveda & Yoga
- Vangasena Samhita (Kushtha Roga Adhikara) describes the oil as Madar Taila.
- **Yogaratnakara** (Kushtha Chikitsa Adhyaya) also cites Arka Tailam with therapeutic applications.<sup>(13-18)</sup>

These classical texts recommend **Arka Taila** in the management of dermatological conditions such as Vicharchika (eczema), Pama (scabies), and Kandu (pruritus or itching). In addition, Rasaratna Samuchchaya (Karna-Nasa-Mukha Roga Chikitsa Adhyaya) prescribes Arkapatra Swarasa Siddha Taila specifically for Karna Shula (earache).

Composition and Pharmacological Basis:

The formulation of Arka Taila is notably simple yet pharmacologically potent. It comprises three primary ingredients:

- 1. Arka Patra Swarasa (juice of Calotropis procera or C. gigantea) the principal bioactive component, known for its anti-inflammatory, antipruritic, and antimicrobial properties.
- 2. Haridra (Curcuma longa, turmeric) a well-established anti-inflammatory and antioxidant agent, rich in curcuminoids, particularly curcumin.
- 3. Sarshapa Taila (Brassica juncea, mustard oil) used as the lipid base, it facilitates transdermal absorption and possesses rubefacient and antimicrobial activity.

The formulation process involves Swarasa Siddhi, wherein the fresh juice of Arka leaves is processed with Haridra and mustard oil through controlled heating, enhancing the bioavailability of the phytoconstituents.

The classical formulation of Arka Taila includes:

- Arka Patra Swarasa: Fresh juice extracted from the leaves of Calotropis gigantea/C. Procera (commonly known as Arka).
- Haridra Kalka: A paste made from dried turmeric (Curcuma longa).
- Sarshapa Taila: Mustard oil (Brassica nigra).

#### Method of Preparation of Arka Taila

The preparation process follows the classical Ayurvedic method of **Sneha Paka**, which involves several key steps: It is recommended to do Sarshap tail murchana before preparation of Ark tail

### agredients for Sershen toil (Ketu Toil) Murchane

Ingredients for Sarshap tail (Katu Tail) Murchana

	<u>Sumai of Ayun</u>	reua a ruga
Dravya (Drugs)	Latin Name	Part Used
Amalaki	Emblica officinalis	Fruit
Haridra	Curcuma longa	Rhizome
Mustaka	Cyperus rotundus	Rhizome
Bilva	Aegle marmelos	Fruit
Dadima	Punica Granatum	Bees(seeds)
Nag Keshar	Mesue ferrea	Puspkalika (flower)
Krushna Jirak	Nigella Sativa	Bees(seeds)
Hribera/Netra bala	Pavonia odiorata	Root
Nalika/Naluka	Nelumbo Nucifera	Stem
Bibhitaki	Terminalia bellirica	Fruit
Manjistha/Aruna	Rubia Cordifolia	Stem

The Murchana of Sarṣapa Taila should be performed using the Sneha Murchana process.

- 1. Extraction of Arka Patra Swarasa:
  - Fresh Arka leaves are cleaned and ground with water to extract the juice.
  - The juice is filtered and collected for use in the preparation.

#### 2. Preparation of Haridra Kalka:

• Fresh Haridra Rhizome or Dried turmeric is powdered and mixed with a small amount of water to form a paste.

#### 3. Sneha Paka (Oil Preparation):

- Mustard oil is heated gently to remove any moisture content. Recommended to take Murchit Sarshap (Mustard) oil.
- The Haridra Kalka is added to the heated oil and stirred continuously.
- Arka Patra Swarasa is gradually introduced into the mixture.
- The mixture is heated on low flame (Mandagni) until it reaches the **Kharapaka** stage, characterized by the oil's consistency and the absence of crackling sounds when tested.
- The preparation is then cooled and filtered to obtain the final Arka Taila.

#### **Therapeutic Properties**

Arka Taila is known for its following attributes:

- Rasa (Taste): Katu (pungent) and Tikta (bitter)
- Guna (Qualities): Ruksha (dry), Laghu (light), and Tikshna (sharp)
- Virya (Potency): Ushna (hot)
- Vipaka (Post-digestive effect): Katu (pungent) Urveda & Yoga
- **Dosha Effect**: Balances Vata and Kapha doshas, especially at the level of the skin.

These properties make it effective in treating conditions like itching, scabies, and eczema.

Arka Taila, due to its synergistic pharmacodynamic profile, is traditionally employed for its Kusthaghna (anti-dermatotic), Kandughna (anti-pruritic), and Shothahara (anti-inflammatory) actions. Its simplicity, ease of preparation, and clinical efficacy render it a valuable therapeutic agent in the Ayurvedic management of cutaneous and ear disorders.<sup>(19-22)</sup>

#### DISCUSSION

**Sneha Kalpana**, a fundamental pharmaceutical process in Ayurveda, has been practised since the Vedic period in various forms. However, a systematic and detailed account of its preparation and applications is found in classical Ayurvedic literature from the **Samhita Kala** (the period of Ayurvedic compendia). This dosage form primarily encompasses **Taila** 

#### Kalpana (medicated oils) and Ghrita Kalpana (medicated ghee formulations).

These formulations are traditionally used for **external application** with or without massage (Abhyanga) and are also widely administered **orally** for systemic therapeutic effects. Sneha Kalpana-based formulations are frequently prescribed by Ayurvedic practitioners for the management of a wide spectrum of disorders. These formulations also play an integral role in various phases of **Panchakarma**, the fivefold detoxification and rejuvenation regimen in Ayurveda. Arka Taila exemplifies the integration of traditional Ayurvedic knowledge with modern therapeutic practices. Its application in treating skin disorders, karnasrava and otomycosis, along with its wound healing properties, underscores its potential as a holistic treatment option.

#### CONCLUSION

Recent scientific investigations have validated that Sneha Kalpana formulations exhibit **systemic pharmacological activity**, confirming their internal absorption and bioavailability. They are thus applicable for both **local (topical)** and **systemic** therapeutic interventions.

Among the various types of Snehas described in the Ayurvedic classics, **Taila** and **Ghrita Kalpana** remain the most prevalent in clinical practice. The use of **Ghrita** as a lipid base is not only for its solubilising property but also for its role in enhancing the **bioavailability** and **stability** of active herbal compounds. These preparations also demonstrate **extended shelf life** compared to many aqueous-based herbal formulations.

In conclusion, **Sneha Kalpana** represents a versatile and scientifically significant category of Ayurvedic pharmaceutics, characterised by its ability to deliver both lipid- and water-soluble phytochemicals effectively, with wide-ranging applications in preventive and therapeutic medicine. Ark Taila is a traditional Ayurvedic medicated oil recognised for its therapeutic potential in the management of various dermatological disorders. It exerts its action primarily through the pacification of aggravated Kapha and Pitta doshas, which are considered central to the pathogenesis of skin diseases such as Vicharchika (commonly correlated with eczema in modern medicine).

The formulation exhibits notable efficacy in reducing pruritus (itching), erythema, and inflammatory lesions associated with chronic skin conditions. Additionally, Ark Taila has demonstrated wound healing properties and is beneficial in the treatment of cracked heels (Padadari), where it aids in tissue regeneration and repair.

Being derived from herbal ingredients and processed using classical Ayurvedic techniques, Ark Taila is non-toxic and well-tolerated, making it a safe option for topical therapeutic use. Its lipid base enhances transdermal absorption, contributing to its clinical effectiveness in managing a wide range of skin ailments.

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