Standard Operating Procedure (SOP) for Preparation of Arka Taila: An Ayurvedic Oil Based Medicine

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Abstract
Shaalaakya Tantra, one among the eight branches of Ayurveda, deals with the precious supra clavicular organs, Head and Neck, the diseases affecting them and their management. Sneha Kalpanaa is a process to get the oleaginous medicinal substances. Karnasraava is a disease mentioned by Aachaarya Sushruta in the chapter of Karnaroga Vigyaaniya among twenty eight Karnarogas. Karnasraava means discharge from ear which can be correlated with otorrhoea. Arka Taila has been mentioned in Shaarangadhar, Bhaavaprakaasha, Gadanigraha, Bangsena etc. It is a very simple formula having ingredients i.e. Haridra, Arka Patra Swarasund Sarshapa Taila, which are very cheap and easily available in their authentic form. Preparation of Arka Taila is very easy and cost effective. All the ingredients are having Kanduhara (antipruritus), Vrana Ropana (healing property), Jantughna (antibacterial) properties.

Keywords
Arkataila, Standard Operating Procedure (SOP), Karnasraava
INTRODUCTION

*Sneha Kalpana* is a process to get the oleaginous medicinal substances.*Taila Kalpana* is a technique where *Taila* is used as a base to get properties of the herbs in the media of *Sarshapa Taila*. The *Taila* acts not only as base but also a vehicle. The active constituents of the drugs are incorporated into the *Taila* to make the preparation therapeutically more potent.

*Arka Taila* consists of three drugs which are *Arka, Haridraa* and *Sarshapa Taila*. *Arka Taila* was prepared by general method of preparation of *Taila Kalpana* in the Department of Rasashashtra and Bhaishajya Kalpana I.P.G.T. & R.A., Jamnagar.

The proportion of all the ingredients is as follow,

<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>Ingredients</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Haridra Kalka</td>
<td>1/8 part</td>
</tr>
<tr>
<td>2</td>
<td>Sarshapa Taila</td>
<td>1 part</td>
</tr>
<tr>
<td>3</td>
<td>Arka Patra Swarasa</td>
<td>4 part</td>
</tr>
</tbody>
</table>

- **Sneha Dravya**: *Sarshapa Taila* (processed oil from seeds of *Brasica campestris*)
- **Drava Dravya**: *Arka Patra Swarasa* (juice obtained from macerated leaves of *Calotropis procera*)
- **Kalka Dravya**: A fine paste obtained from fresh *Haridra kanda* (rhizome of *Curcuma longa*)

AYURVEDIC PROPERTIES OF DRUGS OF ARKA TAILA:

1. **ARKA**
   - **Botanical Name**: *Calotropis procera*
   - **Natural Order**: Asclepiadaceae.
   - **Classical Names**: *Arka, Raktaarka, Toolaphala, Ksirparna, Arkaparna, Vikirana, Asphotaa*.
   - **English Name**: Madara.
   - **Part Used**: Leaf.
   - **AYURVEDIC PROPERTIES**:
     - **Rasa**: Katu, Tikta; (Flower) Tikta, Madhura
     - **Guna**: Ruksha, Laghu, Tikshna.
     - **Veerya**: Ushna.
     - **Vipaaka**: Katu
     - **Doshaghnataa**: Kapha - Vaatashaamaka.
     - **Karma**: Vedanaa Sthaapana, Shothahara, Vranashodhana, Jantughna, Vamanopaga, Deepana (appetizer), Paachana (digestive), Pittasaaraka, Rechana (laxative,), Krimighna (antihelminthic), Amashayakshobhaka, Hridayottejaka, Raktasodhaka.
• **Rogagnata** : Shotha (inflammation), Vedanaa (pain), Shleepada (filariasis), Aamavaata (Rhematoidarthritis), Karnaroga (ear disorders), Vrana (wounds), Granthi, Khaalilitya (hair fall), Charmaroga, Shwitra, Kushtha, Arsha (piles), Dantashula (pain in teeth), Agnimaandya (anorexia), Ajirna, Yakritivikaara (liver disorders), Vibandha (constipation), Gulma, Udararoga, Krimi (worms), Visuchika (dysentery), Upadansha, Hriddaurbalya, Raktavikaara, Kasa (cough), Shwaasa (asthma), Jirnjwara, (chronic fever), Vishamajwara (Malaria), Sarpavisha.

2. **HARIDRA**

- **Botanical Name** : Curcuma longa. Linn.
- **Natural Order** : Zingiberaceae
- **Classical Names** : Rajani, Nishaa, Gauri, Krimighna, Yoshiatpriya, Kanchani, Hattavilaasini
- **English Name** : Turmeric.
- **Part Used** : Rhizome.
- **AYURVEDIC PROPERTIES**:
  - **Rasa** : Tikta, Katu.
  - **Guna** : Ruksha, Laghu.
  - **Veerya** : Ushna
  - **Vipaaka** : Katu
  - **Doshaghnata** : Tridoshashaamaka.

• **Karma** :
  - Varnya (good for wound), Kusthaghna (medicaments for skin disorders), Raktaprasaadana, Raktavardhaka, Vranashodhana (wound cleaner), Vranaropana (wound healer), Hikkaanigrhana, Shwaasahara (anti-asthemetic), Vishaghna (antidot), Anulomana (carminative), Pittarechaka, Ruchivardhaka, Krimighna (antihelmintic), Shothaghna (anti-inflammatory), Vedanaasthapana (analgesic), Jwaraghna (antipyretic), Mutrasangrakhaniya, Mutrvirajaniya.

• **Rogagnataa** : Shotha (inflammation), Vedanaa (pain), Vrana (ulcer or wound), Shwaasa (asthma), Aruchi (anorexia), Vibandha (constipation), Kaamala (jaundice), Jalodara (asitice), Krimi (antihelminthic), Paandu (anaemia), Kaasa (cough), Pratishyaaya (rhinitis), Shukrameha, Prameha (diabetes mellitus), Kandu (pruritus), Shitapitta (urticaria), Kustha (skin disorders).

3. **SARSHAPA**

- **Botanical Name** : Brasica campestris
- **Natural Order** : Cruciferae
- **Classical Names** : Sarshapa, Siddhaarthra
- **English Name** : Mustard (Seed)
- **Part Used**: Seed (Oil)

**AYURVEDIC PROPERTIES**:
- **Rasa**: Katu, Tikta.
- **Guna**: Tikshna, Snigdha
- **Veerya**: Ushna
- **Vipaka**: Katu
- **Doshaghnata**: Kapha - Vaata
- **Shaamaka**
- **Karma**: Lekhana, Vidaahi, Agnideepana (appetizer), Vamanopaga (emetic property), Varnya, Rakta-pittavardhaka, Krimighna (anthelmintic), Jantughna, Dantapuyaghna (tonic), Kustighna (medicaments for skin disorders), Shonitotklesha (seed).
- **Rogaghnata**: Kustha (skin disorders), Plihavridhhi (spleenomegali), Krimiroga (worms), Rajorodha, Vishaghna (antidot), Udardaghna, Karnaroga (ear diseases), Vatavyadhi.

Quality control of *Arka Taila* remains an unexplored issue despite of its increase in the popularity. Thus, in the present work an attempt has been made to use some newer approaches for the standardization of *Arka Taila* with following objectives:

**AIMS AND OBJECTIVES**
- To develop Standardized Operating Procedure (SOP) for the preparation of *Arka Taila*.

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**MATERIALS AND METHODS**

**Selection, processing and quality evaluation of the raw materials:**

Fresh *Haridraa* was collected from the vegetable market of Jamnagar, *Sarshapa Taila* was purchased from oil mill of Jamnagar and for *Swarasa*, fresh *Arka Patra* was collected from periphery of Jamnagar city. As identification of the raw materials used to prepare any finished product is a must, all ingredients procured through local market were authenticated by Department of Pharmacognosy, I.P.G.T. & R.A., Jamnagar.

**Preparation of Arka Taila**:

The SOP for the preparation of *Arka Taila* involved following steps:
- *Pakva Arka Patra* was collected and washed thoroughly with water.
- It wiped out with cotton cloth and weight was measured which was 12 kgs.
- *Swarasa* was extracted from fresh *Arka Patra* by using mixture machine.
- Thus 8 liters of *Arka Patra Swarasa* was obtained.
- 500 gm fresh *Haridraa* was made into *Kalka* form by using mixture machine.
- 2 liters of *Sarshapa Taila* was taken in a steel vessel and heated in *MadhyamaAgni*.
i.e. 100ºC till complete evaporation of moisture contents.

- The *HaridraaKalka* was added to the *Taila* followed by addition of *Arka PatraSwarasa*. Heating was continued with continuous stirring of the mixture for 1 hr.
- Next day, heating was done at the temperature of 70º-90º C for the duration of five hours.
- On third day, heating was done for seven hours at the same temperature and *SiddhaKharapaaka Lakshana* like frothing of *Taila* and breaking down of *Kalka* into pieces on attempting to form a *Varti*.
- After self cooling filtering of the *Taila* with the dry clean cloth was done and *Taila* was collected measured which is of 1850 ml.
- Thus obtained *Taila* was stored in a clean and dry container.

**OBSERVATIONS AND DISCUSSION**

- Quality assurance is an integral part of all systems of medicine to ensure the quality medicament. Various multidisciplinary and analytical approaches such as development of SOP, preliminary phytochemical and physicochemical evaluation, chromatographic evaluation etc., have been employed and reported for the scientific evaluation of various traditional formulations. In the present research work, Standard Operating Procedure (SOP) was developed for preparation of *Arka Taila*. 
While preparation of *Arka Taila*, it was closely observed till the achievement of desired *Sneha Siddhi Lakshana acc. to Ayurveda*. Some of the key observations were done during the preparation of *Arka Taila* as follows,

1. It is better to use fresh leaves of *Arka* (*Calotropis procera*) because it contains more juice than old one.
2. The whole mixture was heated on moderate fire. *(Madhyamagni)* the benefit of this step is that it can prevent deterioration of active principles within the medicines.
3. If the *Taila*, is prepared according to given classical methods in *Ayurveda*, it was observed in analysis that no microbial contamination found.
4. The method of manufacturing of Arka Taila is very easy and can be implemented for larger scale production.

**CONCLUSION**

It can be concluded that by developing standard operating procedure (SOP) for preparation of *Arka Taila* will help for larger scale manufacturing as well as can help to prevent batch to batch variation. As *Arka Taila* contains a wide range of phytochemical components, it is needed to validate its therapeutic utility through preclinical and clinical studies also.
REFERENCES


8. Radhakrushna Parashara (1961)
Sharangdhar Samhita Madhyama Khanda
9/144, Baidyanath Ayurved Bhavan
Publication Varanasi, edition-1st march-1961 pg.no.-344