A CRITICAL REVIEW ON ARKA KALPANA.

Sanober R. Shaikh,¹* Shailaja Chondikar.²

1. P.G. Scholar, Dept. of Rashastra Bhaishajaya Kalpana, Shri Saptashrungi Ayurved Collage and Hospital, Nashik, MS, India.
2. HOD & PG Guide, Dept. of Rashastra Bhaishajaya Kalpana, Shri Saptashrungi Ayurved Collage and Hospital, Nashik, MS, India.

Received on: 3/02/2020; Revised on: 27/02/2020; Accepted on: 03/03/2020

ABSTRACT

Bhaishjaya kalpana is one of the branches of Ayurveda. It is deal with various formulation, pharmaceutical and therapeutic uses of the drug. Dosage derived from Panchvidh kashaya kalpana. Many formulations are given by Acharyas. Five basic kalpana are seen in samhitas. They are swarasas, kalka, kwatha, hima and phanta. According to Arka prakash samhita Kalka, Choorna, Rasa, Taila and Arka are Panchvidh kashaya kalpana. Arka kalpana has more important than other because of its potency. Here is potency due to its gunas and dosharahtvata. Arka-Kalpana introduced in pharmacy of Ayurveda in later part of development. Arka contains volatile active substance. Arka have more potency, less dose, more self-life, easy absorption, quick action and patient compliance. Due to these reasons, it is very popular now a days. In preparation of arka specific yantra, agni, patras and different methods and consistency of drug are important. According to ancient text arka is used in different preparation bhavana dravya for purification or shodhan of drugs. Now a days, distillation apparatus is used for preparation of arka.

Keywords: Panchvidh kalpana, Arka, Method of preparation, Distillation.

1. INTRODUCTION

Ayurveda is an ancient system of medicine of Indian subcontinent. It is 5000 years old system which provides healing through nature. Origin of Ayurveda is found in vedic culture. As a science of Life and Health, the different branches of Ayurveda have evolved over the long period as health being mainly concerned with keeping the body fit and preventing as well as curing the disease, which its main objective. Logically therefore, there has been a constant research on therapeutic agents that keep the body fit increase its capacity to combat a disease and bring it back to normal. These therapeutic agents are termed as Drugs. Many formulations are given by Acharyas. Five basic kalpana are seen in samhitas. They are swarasas, kalka, kwatha, hima and phanta.¹ According to Arka prakash samhita Kalka, Choorna, Rasa, Taila and Arka are Panchvidh kashaya kalpana.² Drugs are given in different forms like kwath, kalka etc as per patient’s convenience and as per drugs availabilities. Arka is one of them. The drugs which contain volatile substance from that Arka is obtain.³

The word ARKA is derived from RUGATAU. Every root contains meaning. Gati motion denotes three different meaning i.e. Gyan, Gaman and Prapti. The knowledge of the content is thing i.e. [gyan], water gives the motion to the contents [i.e. ganam] and finally desired active ingredient is separated [i.e. prapti]. The method by which the volatile oil and active principles of the drug are collected is called as arka kalpana and the compound prepared through this procedure is called as Arka.⁴

Classification of Arka

*Corresponding Author: Sanober Shaikh. Email: drsanobershaikh2u@gmail.com.
A. Classification according to contents

- **Esthira arka**: Extraction of Arka from the drugs with non-volatile oil. e.g. Dashamule Triphala etc.
- **Gandha arka**: Extraction of Arka from the drugs having fragrance or volatile oil e.g. Ajmoda etc.
- **Drava arka**: Extraction of Arka from the liquid drugs.

B. Classification according to duration of preparation

- **Nyune**: Prepared in 1 Praher (3 hrs)
- **Madhya arka**: Prepared in 2 Praher (6 hrs)
- **Shreshitha arka**: Prepared in 3 Praher (9hrs)

C. Classification according to part used

- Pushp arka
- Kshiri vriksha arka
- Tail dhanya arka
- Tandul arka
- Satu dhanya arka
- Visha varga arka
- Sugandha gana arka

2. MATERIALS AND METHODS

2.1. Objectives

To review the arka kalpana from Ayurveda samhitas

2.2. Materials

Kastha, Ayushadhi dravya, chulika, sangraha patra, Arka yantra (distillation apparatus). Iron powder, geru, alum, black clay, red clay, bone powder and glass powder are used in making clay pot.

2.3. Methods of preparation of Arka

For the preparation of arka drug is soaked the over night or day. Then, kept in arka yantra over medium flame. Steam is collected in liquid. This is known as Arka. Apart from general method some special methods are also mentioned by Arka prakash. Viz. 1) Very hard drug 2) Hard drug 3) Fresh drug 4) Twig and 5) Liquid drug.

2.3.1. Arka of Dry drugs

Double quantity of water is added for soaked to the drug. It is kept over night or day. After that by using arka yantra arka is obtained. About 60 % Arka is obtained. Quantity of water added is as follows – (Details are mentioned in Table No. 1)

- Dry and Soft drug: 6 - 8 times of water
- Dry and Moderately hard: 8 times of water
- Dry and Hard: 10 times of water

2.3.2. Arka of Wet Drugs

From Wet drugs about 60% arka is obtained. Quantity of water added is as follows -

- Wet and soft drug: 6 times of water
- Wet and mildly hard: 8 times of water

2.3.3. Arka of liquid drugs

Liquid Drugs are poured in Arka Yantra and Arka is prepared.

2.3.4. Madyarka

Arka can be obtained from different types of Sandhan Kalpana. For example, by using Arka Patanyantra Madyarka can be prepared from asava, arishta, sawirak, tushodak, shukta etc. One part of rice and four parts of water, should be kept in a big pot. After fermentation it should be distilled and used as Madyarka.

2.3.5. Preparation of Arka From Narcotics

For narcotics like Bhanga, 1/4th part of Ajamoda should be added into narcotic drugs while preparing Arka.

2.4. Distribution of Agni in Arka preparation

In Arka Prakash for the preparation of Arka, 6 types of Agni are given. There is gradual increase of fire in every next type. Viz. Dhumagni, Dipagni, Mandagni, Madhyamagni, Kharagni, and Bhattagni. While preparing the Arka at first Dhumagni should be given up to one and half prahara (4:30 hrs) followed by one prahara (3:00 hrs) Dipagni, half prahara (1:30 hrs) Mandagni, one muhurta (45 min) madhyamagni and for one muhurta (45 min) kharagni should be given. For coal kadhir
kashtha is used.

2.5. Precautions

- Arka yantra are sealed with mud and clay.
- Cool water is placed in upper portion. Water change from time to time.
- Flame should be medium.
- If drug is soaked in sun light then 4 times water is added.

2.6. Characteristic of Arka

- Clear and transparent
- Taste according to original drugs.
- Order according to original drugs.

2.7. After preparation

Bad smelling Arka is further fumigated Hingu, Rajika etc. Dhum. This fumigation is repeated many times in order to remove bad smell. Arka should be stored in air tight glass bottles. Arka if kept open and exposed to air, will lose its volatile medicinal principle.

2.8. Modern Aspect

2.8.1. Types of Distillation

- Simple distillation
- Fractional distillation
- Descructive distillation
- Steam distillation
- Vacuum distillation

2.8.2. Apparatus

- Boiler (Heating mantle) which provides heat and maintain the heat.
- Vessel in which vapour are produced by heating the liquid up to its boiling point.
- Condenser- This function as a cooling device of vapour either by circulation of water or air at atmospheric e.g. Leibig condenser, worm condenser, Hallock block- tincoll condenser, Reflux condenser (Return -flow condenser), soxcelent extraction apparatus.
- Receiver It is used for the collection of the condensed liquid.

2.8.3. Process

It contains 2 processes viz. Evaporation and Condensation.

Evaporation: Evaporation may be defined as the free escape of vapour from the surface of a liquid. It should be distinguished from boiling or ebulition which takes place at one temperature only for a given pressure.

2. Condensation: Condensation is the process of evaporation or vaporization. It will be recalled that, in order that 1gm of water at 100°c may be converted into water vapour (at normal atmospheric pressure) of the same temperature, the expenditure of 537 cal. of heat energy is required. Accordingly, when water vapour is condensed by cooling, this same quantity of heat (the latent heat of vaporization) is liberated. Unless adequate provision is made to carry away the heat that is released, the condenser soon becomes too hot to condense the vapour at all and permits it to escape into the atmosphere.

3. DISCUSSION

The word Arka is not mentioned in Vedic literature as well as in Samhita grantha and even Sangraha granthas. Arka kalpana is mentioned in Arka Prakash written by Ravan. According to P.V. Sharma when Mughals came to India, they used Arka in their medicinal practice. Detail of arka kalpana is mentioned in Arka Prakash grantha. Arka is used in various diseases e.g. Brahmi arka is used in Unmada, Apasmarr. Tulsi arka is used in Kasa, Shwasa. Triphala arka is used in Pandu, Kamala. Panduvara arka is used in Pandu etc. Arka is used to do shodhan of parad and other drugs. Arka has more potency, palatability, more self-life. Less dose is required. These characteristics are very useful in pharmaceutical aspect. Distillation is used to obtain the arka. The procedure depends upon the different boiling point of the drugs. General methods of formation of Arka is given in AFI so that Active principle come in final product.

4. CONCLUSION

Arka kalpana is distinct Kalpana from other and one of the best kapana. Its contents are volatile. Its self-life is 1-2 yrs. Phytochemicals can be preserved for 1-2 years in form of Arka kal-
Due to quick absorption, *Arka kalpana* is more useful now a days. More research work should be carried on separation of the phytochemicals.

**REFERENCES**


**TABLE**

<table>
<thead>
<tr>
<th>Parts of drug</th>
<th>Quantity of water added</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Juicy drug</td>
<td>1/20th part of water</td>
<td>-</td>
</tr>
<tr>
<td>Leaves</td>
<td>1/100th part of water</td>
<td>24 hours</td>
</tr>
<tr>
<td>Fruit</td>
<td>No water</td>
<td>-</td>
</tr>
<tr>
<td>Green and juiceless</td>
<td>1/20th part of water</td>
<td>3 hours</td>
</tr>
<tr>
<td>Flowers</td>
<td>1/16th part of water</td>
<td>3 hours</td>
</tr>
<tr>
<td><em>Mrudu</em> milky drugs</td>
<td>4 times of water added</td>
<td>-</td>
</tr>
<tr>
<td><em>Tikshna</em> milky</td>
<td>1/10th part of water</td>
<td>-</td>
</tr>
</tbody>
</table>

Table No. 1 Quantity of water for milky drugs

Cite this article as:

Source of Support: Nil;  Conflict of Interest: None declared.