POTTALI KALPANA IN AYURVEDA  
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ABSTRACT  
In Rasashastra various Rasakalpas are described. Four types of rasakalpas are Khalviya, Parpati, Kupipakwa and Pottali Rasakalpas. They have unique place in ayurvedic therapeutics because of their qualities. Out of these four kalpas, Khalviya, Parpati and Kupipakwa rasakalpas are widely used by Vaidyas in their practice. But pottali kalpas are very rarely used. The process which gives compactness to scattered material is known as pottali, for e.g. Hemagarbha pottali, Lohagarbha pottali, Tamragarbha pottali etc. Pottali is a technique in which the composition is treated in pouch made of silk cloth in molten Gandhaka. The specific technique is developed for potentiating the constituents and forming a complex with high therapeutic efficacy. Actually it has qualities like high potency, very less dose, absorbs immediately in blood circulation and show the desired effect within a short period, easy to carry and maximum shelf life. It can be considered as an emergency dosage form. In this article review of pottali kalpana is taken to highlight the importance of this rarely used dosage form and understand the manufacturing process of Pottali kalpana.  
Keywords- Pottali, high potency, compactness, silk cloth, emergency dosage form.

INTRODUCTION  
Rasoushadhis have unique place in Ayurvedic therapeutics because of their qualities like Alpamatropyogitwat i.e. very less dose, Aruche i.e. tasteless, Aprasanga means it can be used at any stage of diseases, it can be used in an emergency. Generally when Bhashajakalpas are used, samavastha or Niramavastha has to be considered. But Rasakalpas can be used without considering these stages. Kshipramarogyayaditwat means Rasakalpas act immediately in the body. Therefore Rasakalpas are more effective.1  
There are four types of Rasakalpas are mentioned.- 
1. Khalviya Rasakalpa  
2. Parpati Rasakalpa  
3. Kupipakwa Rasakalpa  
4. Pottali Rasakalpa  
Pottali Kalpana- Pottali can be defined as to collect scattered material into compact and comprehensive size or the processing which give compactness to scattered materials.  
Pottali kalpas are made by giving more heat so bond of pottali kalpa is more potent than kajjali and parpati. Therefore it might be absorbed immediately in smaller dose.  
Preparation of Pottali kalpana is similar with Guda kalpana of Charaka Sampradaya in Samhitakala, to increase shelf life of churnas, jagery and sugar were used which leads to invention of Gutivati kalpana or guda kalpana. In Gudakalpana powder is coated with Guda, similarly in Pottali
kalpana powder is coated or covered with cloth or pottali and then processed. In this way during rasakala to increase shelf life of kalpas Gandhaka was used which leads to invention of Pottali kalpana.

During ancient time, there were no proper transportation services. Vaidyas had to go for treating patients at various places by travelling. They have to carry medicines along with them which usually get spoil due to mixing or if fallen on breakage of Kupis. To avoid these problems, Vaidya invented a formulary technique, which enabled him to carry all varieties of medicine in single form, easy to dispense with less dose and high efficacy. This was considered lifesaving emergency dosage form because of its rapid absorption and fast action. Gandhaka detoxifies and fixes parada, enhances drug properties in kalpas.

First reference of pottali kalpna is found in Rasaratnakara of Nityanatha in 12th A.D.In Rasaprakasha Sudhakara of 13th century A.D., the preparation of Pottali by Gandhaka dravapaka in the context of Vajra pottali is found. Yogaratnakara in 18th century has mentioned Gandhaka drava in an iron vessel. Acharya Nityanatha has mentioned two Pottali kalpas.1) Ratnagarbha Pottali 2) Shankhagarbha Pottali

Different Pottali kalpas described in various texts are compiled in following table. There is repetition of some kalpas in different texts.

<table>
<thead>
<tr>
<th>Sr No.</th>
<th>Name of Grantha</th>
<th>Name of Author</th>
<th>Period</th>
<th>Name of Pottali Kalpa</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Rasa chintamani</td>
<td>Acharya Anant Dev Suri</td>
<td>14th A.D.</td>
<td>1.Panchamrut Pottali 2. Lokesh Pottali</td>
</tr>
</tbody>
</table>
| No. | Rasa Kankaliya | Acharya Kankaliya | 14th A.D. | 1. Kanak Pottali  
2. Mrugank Pottali  
3. Loknath Pottali  
4. Shankhagarbha Pottali  
5. Hiranyagarbha Pottali |
|-----|----------------|-------------------|----------|---------------------------------------------------------------------|
| 6   | Rasa Kankaliya | Acharya Kankaliya | 14th A.D. | 1. Kanak Pottali  
2. Mrugank Pottali  
3. Loknath Pottali  
4. Shankhagarbha Pottali  
5. Hiranyagarbha Pottali |
| 7   | Rasavatara     | Acharya Manikchandra Jain | 14th A.D. | 1. Mrugank Pottali  
2. Loknath Pottali  
3. Ratnagarbha Pottali |
| 8   | Sharangadhar Samhita | Acharya Bhavamishra | 14th A.D. | 1. Mrugank Pottali  
2. Hemagarbha Pottali-1  
2. Hemagarbha Pottali-2 |
| 9   | Bhavaprakash   | Avharya Bhavamishra | 14th A.D. | 1. Shankhagarbha Pottali |
| 10  | Rasakoumudi    | VdJnanchandra Sharma | 14th A.D. | 1. Ratnagarbha Pottali  
2. Shankhagarbha Pottali |
| 11  | Rasakamdhenu   | Achrya Chudamani  | 17th A.D. | 1. Ratnagarbha Pottali-1  
2. Ratnagarbha Pottali-2  
3. Mrugank Pottali  
4. Hiranyagarbha Pottali  
5. Hemagarbha Pottali-1  
6. Hemagarbha Pottali-2  
7. Loknath Pottali  
8. Shankhagarbha Pottali  
9. Lokeshwara Pottali  
10. Ratnagarbha Pottali  
11. Hemagarbha Pottali  
12. Hemagarbha Pottali  
13. Hemagarbha Pottali |
| 12  | Yogaratnakara  | Vd.Laxmipathi Shastri | 18th A.D. | 1. Ratnagarbha Pottali  
2. Lokeshwara Pottali  
3. Hemagarbha Pottali-1  
4. Hemagarbha Pottali-2  
5. Hemagarbha Pottali-3  
6. Hemagarbha Pottali-4 |
| 13  | Bhaishajya Ratnavali | Acharya Govind Das Sen | 18th A.D. | 1. Ratnagarbha Pottali  
2. Lokeshwara Pottali  
3. Hemagarbha Pottali  
4. Hnsagarbha Pottali |
Acharya Yadavaji Trikamji of Rasamruta has mentioned many Pottali kalpas. In all around 82 Poattali Kalpas are found in various texts.

Classification of Pottali kalpas—There are 3 types of Pottali kalpana are described.\(^5,7\)

<table>
<thead>
<tr>
<th>No.</th>
<th>Pottali Kalpa</th>
<th>Author</th>
<th>Date</th>
<th>Types of Pottali Pottali</th>
</tr>
</thead>
</table>
| 14  | Bruhat Yoga Tarangini | Acharya Trimalla Bhatt | 18\(^{th}\) A.D. | 1. Ratnagarbha Pottali  
2. Lokeshwara Pottali |
| 15  | Nighantu Ratnakar | Vd. Godole | 19\(^{th}\) A.D. | 1. Ratnagarbha Pottali  
2. Mrugank Pottali  
3. Loknath Pottali  
4. Shankhagarbha Pottali-1  
5. Shankhagarbha Pottali-2  
6. Hemagarbha Pottali-1  
7. Hemagarbha Pottali-2 |
| 16  | Siddha Bheshaja Manimala | Acharya Krishna Ramji | 20\(^{th}\) A.D. | 1. Retorodhan Pottali  
2. Hemagarbha Pottali  
3. Netra Pottali |
| 17  | Rasayansara | Acharya Shyam sundar acharya | 20\(^{th}\) A.D. | 1. Hemagarbha Pottali  
2. Netra Pottali  
3. Swarnagarbha Pottali |
| 18  | Rasayoga sagara | Pandit Haripurapana Sharma | | 1. Tara garbha Pottali  
2. Tamra garbha Pottali  
3. Lohagarbha Pottali  
4. Mallagarbha Pottali  
5. Talagarbha Pottali  
6. Shilagarbha Pottali  
7. Vishagarbha Pottali  
8. Abhragarbha Pottali  
9. Tridhatugarbha Pottali  
10. Rasagarbha Pottali  
11. Makshikagarbha Pottali  
12. Pravalgarbha Pottali  
13. Ratnagarbha Pottali |
1. **Kaparda Pottali**
Procedure-Medicinal drug is triturated with bhavana dravya. This mixture is filled in Kapardika. The opening of Kapardika is sealed with paste of Godugdha and Tankana. After drying, these Kapardikas are placed in sharava samputa and subjected to Gajaputa. After swangasheeta, sharava was opened and material is transferred to khalwa yantra and make fine powder.
e.g. Lokanath Rasa.

2. **Hemagarbha Pottali**
This is the main procedure of Pottali Kalpana.
Procedure-
1. Medicinal drugs are taken into khalwa.
2. It is triturated with binding agent like Kumari Swarasa, Babbul Niryasa, Chitraka Swarasa. As per Siddha pranali, Egg yolk used as a binding agent.
3. Shikharakara Matras (Pottalis) were prepared from this mixture and dried.
4. Iron vessel is filled with valuka. Another iron vessel or Musha containing Gandhaka powder is kept on valuka.
5. valuka yantra is kept on gas and heat is to be given. Valuka yantra is used to maintain uniform and sustained heat to Pottali and to prevent catching of fire by Gandhaka in Musha.
6. Prepared matra is tied in four fold silk cloth and this pottali is kept in Gandhaka.
7. After heating Gandhaka melts and pottalis are placed in melted Gandhaka.
8. This procedure is done for 3-4 hours till pottali siddhi lakshana attains.
9. Gandhaka should be in molten state throughout the procedure.
10. After pakwa lakshnas are observed, pottalis are taken out from Gandhaka.
11. Pakwa lakshnas are, colour of Gandhaka becomes vyoma varna i.e bluish black and Gandhaka become more viscous, pottalies become stony hard and produces metallic sound and burning of silk cloth should be observed.\(^6^,^7^,^8\)

12. Silk cloth is removed and Pottalis are polished and preserved. While using, the pottali should be rubbed over a rough surface for desired number of rotations by applying Honey or Ghrita as a medium and whole paste is administered orally. Sublingual absorption is takes place and immediately may give results.

3. **Retorodhana Pottali**
Procedure-
Medicinal drugs are taken. Pottali is made. It is tied in cloth and heated in milk or it is cooked in Moong dal and Rice. This cooked rice is also used as medicine.

Some Acharyas are described pottali kalpas of single herbs. Due to this different procedure of boiling in Gandhaka, efficacy of herb is increased.

**Uses of Pottali in today’s era—**
Many Vaidyas use this pottali kalpas in their practice. Some Pharmaceutical companies also making some pottali kalpas.

Mainly used pottali kalpas are, Loknatha rasa, Hemagarbha pottali. As the pottali kalpas can be used as an emergency medicine, its manufacturing units should be increased. So that these formulations will be easily available for use in practice.

**DISCUSSION**
Pottali kalpana is one of the four rasa kalpanas mentioned in Rasashastra. Its preparation method is unique. Pottali kalpana is a Sagandha Sagni Murchchana of Parada. Pachana of pottali is done in molten
gandhaka. Gandhaka is selected as a media for paka because other media e.g. Taila, Kwath, relatively evaporates fast. Gandhaka forms protective coat on ingredients and protects it from atmospheric attack. Thus preserving properties of a drug for a long time. It has qualities like high potency, very less dose, absorb immediately in blood circulation and shows the desired effect within a short period, easy to carry and maximum shelf life. It can be considered as an emergency dosage form. Therefore it can be used. But due to the uniqueness of procedures Pottalies is not prepared easily. Hence rarely used in practice.

CONCLUSION

Pottalis Kalpas are very useful dosage form. It can be used in Atiyayika awastha or in emergency. Manufacturing process is different but can be made easier with practice. This unique preparation of Pottali kalpana should be manufactured and made easily available to all vaidyas to practice Ayurveda.

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