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JUDICIAL UTILIZATION OF KUPIPAKWA AND POTTALI RASAYANAS BOON FOR AYURVEDIC PRACTICE

IAM

Kannan Mani¹, Priyanka K. Dighde², Sheetal Agrawal³, Ashish Agrawal⁴

¹Professor and HOD (Rachana Sharir), Jupiter Ayurved Medical college and Tarini Ayurved Hospital, Shankarpur, Nagpur, Maharashtra, India
²M.D. Rasashastra and Bhaishajyakalpana;
³M.D. Rasashastra and Bhaishajyakalpana;
⁴Professor & HOD (Kriya Sharir), Vimladevi Ayurvedic Medical College, Chandrapur, Maharashtra, India

Corresponding Author: drprivankadighde@gmail.com

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ABSTRACT

Parada Murchana (Mercurial Preparations) forms the backbone of *Rasashastra* which signifies the formulations of mercury after *Shodhan* (purification) termed as *Rasachikitsa* which includes *Kharaliya*, *Parpati Kupipakwa & Pottali Rasayanas*. Amongst them, *Kupipakwa Rasayana* (KPR) & *Pottali Rasayana* (PTR) are unique pharmaceutical preparations designed to achieve potential therapeutic efficacy by stabilizing the stronger bonds between ingredients. Judicial utilization of these mercurial preparations provides quicker action and synergistic effects with suitable *Anupana* (adjuvants), *Kala* (time) at low doses without producing toxic effects. KPR and PTR give miraculous results in Complicated, Chronic as well as Acute conditions. In the present era, people hesitate to use these medicines due to a lack of knowledge & awareness. This review aims to bring into the limelight the importance of KPR & PTR in the modern era where modern medicines have failed or attained resistance against diseases and also to overcome difficulties that may arise because of the extinction of many herbal drugs.

Keywords: Kupipakwa, Pottali, Rasayana, Rasachikitsa, Murchana, Mercurial preparations

INTRODUCTION

Ayurveda translates as 'life science', the oldest of the traditional systems of medicine accepted worldwide. Rasashastra, a branch of Ayurveda, the miracle mercurial system deals with pharmaceutical aspects of minerals, metals, precious stones, certain poisons into therapeutically potent special formulations to combat diseases difficult to treat. Parad (Mercury) is one of the metals which attracted the wide attention of ayurvedic chemists and physicians. Indeed, the documentation of chemical and physical processes involving mercury is truly enormous in ancient texts of which classics by Vagabhata and Nagarjuna are noteworthy. Parad Murchana^[1] signifies formulations of mercury after Shodhan (purification) termed as *Rasachikitsa* which is further classified into Kharaliya, Parpati, Kupipakva, and Pottali Rasayanas^[2]. During the preparation of Rasaushadhis (Herbometallic formulations) temperature plays a very important role to get the desired and beneficial effect in the final product. Amongst them KPR and PTR being rare, unique, potent, time tested, novel molecules, and clinically proved to be good, it is not freely available in the market owing to its complexity in preparation procedure and as a result of this, its usage has been relegated to oblivion. Keeping the said facts in view, an attempt has been made to unravel the lost glory of this novel medicine. The safety and efficacy of metallic preparations have always been a concern. Research scholars have undertaken Constant efforts in various institutes and were found to be safe for clinical use at therapeutic doses. The dose is very important in all fields of medicine. The dose is that which differentiates Medicine and Poison.

Aim & Objectives:

This present article aims to summarize the detailed knowledge regarding various *KPR* and *PTR*, their

constituents, doses, and their application in Ayurvedic Practice.

Methodology:

Rasachikitsa comprises of

- 1. *Kharaliya Rasayana*: Drugs prepared by grinding in a mortar (*Kharal*) and pestle are called *Kharaliya* drugs. Here *Murchana* of *Parad takes* place due to heat generated with the continuous rotation of pestle in a mortar e.g. *Kajjali*, ^[3]
- 2. *Parpati Rasayana: Kajjali* prepared in *Kharaliya* form is being melted and further distributed over Clarified butter oil-smeared leaves kept over Cow dung slab, and then, it is pressed from above by other leaves and Cow dung slab over it and cooled, resulting in strong bond as compared to *Kharaliya Kalpa*^[4] e.g. *Rasaparpati, Swarnaparpati, etc.*
- 3. *Kupipakwa Rasayana* ^[5]: The terminology *'Kupipakwa'* itself denotes the pharmaceutical processing that is carried out in a specially designed glass bottle by gradual heating immersion in a sand bath (*Valuka Yantra*). Chemical processes are involved in these preparations which also bear testimony to the great chemical knowledge prevailing in ancient India.
- 4. *Pottali Rasayana* ^[6]: *Rasayana* in which the ingredients are made into a compact and comprehensive size and shape or processing technique which gives compactness to scattered material. The important methods are.
- 1. By boiling amidst liquid Sulphur.
- 2. *Kaparda Poorana / Sukti Poorana* method filling the drugs inside cowries/oysters.
- 3. Processed by incineration *Puta Paka* method
- 4. Bhavana Trituration method.

Sr.no	Kupipakwa Rasayana	Constituents	Dose & Anupana	Diseases
1	Rasa sindoor Sama-Gandhak -Jarit ^[7]	<i>Sh. Parad-</i> 1 part <i>Sh. Gandhaka -</i> 1 part	1-2 Ratti. (125-250 mg/day) Honey, Trikatu, Bharangi Swaras (Clerodendrum serratum juice)	Gulma, Rajayakshma, Visphota.
2	Shadgunabalijarita Rasasindoor ^[8] (Rasa tarangini)	Sh. Parad- 1Pala=50 gms Sh. Gandhaka-6 Pala=300 gms Trituration with Indian aloe juice (Bhavana)	According to different Anupanas [23]	Prameha, Bhagandar (Fistula in Ano), Gulma, Kushtha (skin disorders), Pandu, Sthulta (Obesity) etc.
3	Sameer pannga rasa ^[9]	Sh. Parad- 1 part Sh. Gandhaka-1 part Sh. Somala -1 part Sh. Hartaaala- 1 part Sh. Manashila- 1 part	¹ / ₂ Gunja-1 Gunja (60- 120mg) nagavallidal (Betel leaf)	Vaat Pradhan Sannipata, Khaphaj Unmaad Khaphaj Sandhivaat Kaphaj Vikar
4	Makardhwaja ^[10] (Purna Chandrodaya)	Sh. Suvarna- 1 part Sh. Parad- 8 parts Sh. Gandhak -16 parts	15 mg-30 mg butteroil, <i>Honey</i> <i>Nagvallidal</i> (Betel leaf)	Dhatu Kshaya Tarunya Sthapak Vali Palitnashak Vrushya, Kshaya
5	Rasa Karpoor ^[11]	Sh. Parad -1 Pala (50gms) Gandhakaamla (Sulphuric acid) – 1 ½ Pala (75gms) Rock salt- in equal quantity	1/64-1/32 <i>Ratti</i> (2-4mg)	Krimivisha (Toxins), Rakta Dosha, Grahni, Sphota, Mandaladi Kushtha (Skin disorders) Krumi(worms)
6	Rasa Pushpa ^[12]	Sh. Parada-50 gms Rock salt-50 gms Sh. Kasis – 50 gms	 ½-2½ Ratti (60-300mg) Virechan-2 ½ Ratti - (300mg) Hikka- 1 Tandul Firang – ¼ Ratti (30mg) Baalavirechan-½ Ratti (60mg) 	Pittahar Pitta Virechak Mutral, Krimi (Worms) Vrana Dosha (Infected wounds) Visuchika, Jalodar (Ascitis), Hikka, Firang (syphilis)
7	Vyadhiharan Rasa ^[13]	Sh. Parad- 1 part Sh. Gandhak- 1 part RasaKarpoor-2 parts	1-4 Gunja (125-500 mg/day) Nagavallidal (betel leaf)	Upadamsh (Gonorrhea), Vajikarana, (Aphrodiasic), Apatya Prapti (Fertility), Hrudaya Shoola, Vali – Palit
8	Mallasindoor ^[14]	Sh. Parad- 9 Karsha (90gms) Sh. Gandhak- 5 1/2 Karsha (55gms)	32.5-64 mg/day	Upadamsh, Kasa, Visuchika, Vishamjvar and (Pneumonia, Influenza)

Table 1: Some of the Kupipakwa Rasayanas (KPR) is given below

		Somal- 4 Karsha	Pippali (piper longum) and	
		(40gms)	Honey or Ginger juice and	
		Rasakarpoor- 9	Honey	
		Karsha (90gms)		
9	Taalsindoor ^[15]	Sh. Parad, - 6 parts	1-2 Ratti (125-250 mg/day)	Kushta, Upadamsh, Kasa,
		Sh. Gandhak- 1 part	Ginger juice, Honey or	Kshaya
		Sh. Hartal- 1 part	Butter oil	
		Sh. Somal -1 part		
10	Manikya Rasa ^[16]	Sh. Parad- 8 Pala	1-2 Ratti (125-250 mg/day)	Shukrastambha
		(40gms)	Honey	Jara Vyadhi Vinash
		Sh. Naag- 8 Pala		Mahavyadhi Nashan
		Sh. Manashil- 8 Pala		Rajayakshma
11	Panchasuta Rasa	Sh. Parad -1 part	¹ /2-1 Ratti (62 – 125	Urastoya (Pleuritis), Kasa
	Agasti Paath [17]	Sh. Hingul- 1 part	mg/day)	
		Sh. Somal-1 part	Ginger juice, Holy basil	
		Sh. Gandhak- 1 part	juice, Honey	
		Rasasindoor – 1 part		
		Rasakarpoor-1 part		
12	Swarnavang:	Sh. Vanga- 1 part	1-2 Ratti (125-250 mg/day)	Prameha, Balya, Rasayan
	Suwarnarajvangeshwar: [18]	Sh. Parad-1 part	Honey.	(Immunomodulator),
		Sh. Gandhak-1 part		Medha Virya -Agni Vardhan
		Sh. Navasadar-1 part		
		-1/10 part		

 Table 2: Some of the Pottali Rasayanas (PTR)

Sr. No	Pottali Rasayana	Constituents	Dose & Anupana	Uses
1	Hiranyagarbha Pottali	Suvarna Bhasma- 10 Karsha	¹ /2 Gunja (60 mg)	Rajyakshma,
	Rasa ^[19]	Vishuddha Kajjali-1 Karsha	Pippali (piper	Raktakshobha,
	(Gandhaka Drava	Sh. Gandhaka-1Tanka	longum), goat's milk,	Jirnajwara,
	method)	(3gms)	Honey	Oja Kshaya
		Suvarnatanutantu- 6 Ratti		
2	Taragarbha Pottali	Roupya Bhasma-10 Karsha	¹ /2 Ratti (60mg)	Prameha
	Rasa (Shwetavarna)	(100 gms)		Shukra dosha
	[19]	Parad Bhasma- 1 Karsha (10	Tulsi (holy basil	Pitta vikriti
	(Gandhaka Drava	gms)	leaves juice,) Honey	Mutraj Vyadhi (Urinary
	method)	Vishuddha Gandhaka -1		disorders)
		Tanka (3gms)		
		Suvarnatanutantu-6 Ratti		
		(750mgs)		
3	Tamragarbha Pottali	Tamra bhasma-10 Karsha	¹ / ₂ -1 Gunja (60-	Kaphajanya- Tridoshaj
	Rasa ^[19]	(100gms)	120mg)	Shwaas, Kasa
	(Gandhaka Drava	Vishuddha Kajjali- 1 Karsha		Jwara, Shoola
	method)	(10 gms)	Ginger juice+honey	Vardhakya, Shosha
		Sh. Gandhaka-1 Tanka		
		(3gms)		
		Suvarnatanutantu- 6 Ratti		
		(750mg)		

4	Lohagarbha Pottali Rasa ^[19]	Loha Bhasma-10 Karsha Vishuddha Kajjali- 1 Karsha	1-3 Gunja (60-180mg)	Sangrahani Pandu, Kamala
	(Gandhaka Drava method)	Sh. Gandhaka- 1 Tanka (3gms) Suvarnatanutantu- 6 Ratti (750mg)	Ginger juice+honey	Raktakshobha Prameha, Pradar
5	Mallagarbha Pottali Rasa ^[19]	Vishuddhamalla Bhasma-4 Pala- (200gms) Vishuddhaparad/	¹ ⁄ ₂ -2 <i>Tandula</i> (7-30mg)	Jwara, Agnimandya Upadansha, Firanga Bhagandar, Naadivrana
	(Gandhaka Drava method)	Paradbhasma- 2 Karsha (25gms) Sh. Gandhaka- 1 Tanka (3gms) Suvarnatanutantu- 6 Ratti (750mg)	Milk, Milk cream, Top layer of curd	Shwaas, Kasa
6	TaalgarbhaPottaliRasa [19]	Harataal Bhasma-4 Pala Vishuddha Parad/ Parad Bhasma- 2 Karsha	¹ / ₂ Ratti (60mg) Ginger juice+honey	Shwasa, Kasa, Vaatvyadhi Raktashleshmaroga
	(Gandhaka Drava method)	Sh. Gandhaka- 1 Tanka (3gms) Suvarnatanutantu- 6 Ratti (750mg)		
7	Shillagarbha Pottali rasa ^[19] (Gandhaka Drava method)	Sh. Manahshilla - 4 Pala Vishuddha Parad/ Paradbhasma- 2 Karsha Shuddha Gandhaka- 1 Tanka (3gms) Suvarnatanutantu- 6 Ratti (750mg)	¹ /2-1 Gunja (60-120mg) Ativisha (Aconitum hetrophyllum), Katurohini (Picrorhiza kurroa), Honey	Jwara, Shwaas, Kasa,
8	Tridhatugarbha Pottali Rasa ^[19] (Gandhaka Drava method)	Niruthavanga, Naga, Yashad Bhasma – 1 Pala each (50gms) Parad bhasma – 1 Karsha (10gms) Sh. Gandhaka- 1 Tanka (3gms) Suvarnatanutantu- 6 Ratti (750mg)	¹ / ₂ - 2 <i>Ratti</i> Turmeric juice/ Tulsi (holy basil juice) Milk– Shukravardhan	Prameha Putimeha Pradar Shukra dosha
9	Rasagarbha Pottali Rasa ^[19] (Gandhaka Drava	Parad bhasma- 1 Pala (50 gms) Kajjali- 4 Pala (200 gms) Vishuddha Gandhak	1-3 <i>Ratti</i> Ginger juice	Sarvarogahara
	method)	Choorna - 1 Tanka (3gms) Suvarnatanutantu- 6 Ratti (750mg)		
10	Abhragarbha Pottali Rasa ^[19]	Nishchandra VajraAbhraka Bhasma – 4 Pala (200 gms)	½ Gunja	Shwaas, kasa Kshaya, Limainang
	(raktavarna)		Ginger juice	Jirnajwara,

		Parad Bhasma – 1 Karsha		Garbhiniroga,
	(Gandhaka Drava	(10gms)		
	method)	Vishudha Gandhaka- ½		
		Karsha (5gms)		
		Suvarnatanu tantu khanda –		
		6 Ratti (750mg)		
11	Pravaalagarbha	Sh. Praval- 2 pala (100gms)	3 Ratti – 1 Masha	Pandu,
	Pottali Rasa ^[19]	Sh. Mukta - 2 pala	(375-750mg)	Udara,
	(Gandhaka Drava	Sh. Pitta kaparda - 2 pala		Kasa,
	method)	Shankh bhasma -2 pala	Chitrakamula	Shwasa,
		Godanti bhasma – 4 pala	(plumbago zeylanica)	Gulma,
		Parad bhasma – 1 karsha	+ Ginger juice	Baalroga
		(10gms)		
		Suvarnatanutantukhanda – 6		
		ratti (750mg)		
12	Hamsa Pottali	Sh. Parada- 1 part	1 Masha	Grahani
	Rasa ^[20]	Sh. Gandhaka- 1 part	(750 mg)	
	Mardana	Kapardika Bhasma- 1 part	Maricha (Piper	Bhavana -
	(Grinding)	Sunthi (zinziber officinale)	nigrum)	lime juice
		Maricha (piper nigrum),	Choorna	
		pippali (piper longum)- 1 part		
13	Lokeshwara	Parada Bhasma-4 parts	4 Gunja	
	Pottali	Sh. Gandhaka-8 parts	(500mg)	Anga Karshyam,
	Rasa ^[21]	Swarna Bhasma 1 part		Agnimandyam, Pittaj Kasa,
	Kaparda	Bhavana - Chitraka	- Pippali (piper	Kshaya
	Poorita -	Swarasa (plumbago	longum)	
	Gajaputa	zeylanica)	and Honey	
14	Mriganka Pottali Rasa	Sh. Parada-1part	1 Gunja	Rajayakshma
	[22]	Sh. Gandhaka-1 part	(125mg)	
	Gaja Puta	Sankhanabhi-1 part		
		Bhavana-Goat's milk		

DISCUSSION

Several different References, Composition, Indications of KPR [Table no.1] & PTR [Table no. 2] are available in classical texts of Rasashatra. There are a varied number of formulations having the same names with different compositions and indications for example Rasasindoor is explained in different classical texts in multiple ways, say as Samgunbali Jarit, Dwiguna Balijarit, and so on and can be utilized with different Anupanas (adjuvants) in different doses at different age groups.^[23] A varied form of formulations has to be used at different stages of the disease, with varying Dosha-Dushya and Samprapti for different individuals.

Parada Murchanna is associated with Agni Samskara (heating) process is monitored at precisely controlled temperatures. Agni plays an important role in modifying Guru (heavy for digestion) quality of Kajjali to Laghu (light/easily digestible) quality because this change in quality is required for better absorption and assimilation to serve the therapeutic purpose. Bonds formed in Kajjali are weak, they easily breakdown in the stomach, as the further Agnisamsakara is carried out on Kajjali to form Parpati the bond becomes strong those are capable of alleviating Intestinal disorders when Agni Samasakara on Kajjali/ Parad is carried out in Sand bath gradually for longer time bond becomes even stronger which possess the strength to get absorbed through microchannels even sublingually if it is rotated over stone for few times during administration. This technique potentiates the constituents bonding between the constituents forming a coordinating complex with a wide spectrum and high therapeutic efficacy, with a minimum dose. In KPR & PTR the ingredients are made into a compact form for easy administration, preservation, and transportation. Due to a lack of practical application, the present generation of Ayurvedic physicians is not aware of these medicines.

Let's see Hemgarbha Pottali, the main constituents are - Shuddha Parad, which is a potent Antiaging agent (Jara), Another main constituent is Gandhaka which is strong Vishaghna, Jantughna (antimicrobial), *Krimighna* (homicidal), and *Deepan-Pachana*. Because of its synergistic action with Parad, it also potentiates the medicinal and other properties of Parad. So, the Gandhak is written as Sutendra Viryaprada and Sutajeet in Ayurveda. The next constituent of Hemgarbha Pottali is Swarna (gold), which is а well-known Immunomodulator. Rejuvenate, Strengthens the body, acts as a nervine tonic by alleviating Tridoshas (humour) ^[24]. In Hemagarbh Pottali Rasa, Tamra is also used which is useful in Shwasa-kasa, Krimi roga, and Pandu roga (anaemia) ^[25]. It is also good medicine for Liver diseases and a well-known cardiac stimulant. So, by the combination of all i.e. purified mercury, sulphur & gold, thus it is must understand correctly the Guna, Karma, Doshaghnata, Rogaghnata, Prabhava of the individual constituents and hence the potential of the compound.

Applications of KPR & PTR in Practice

• *Malla Sindoor*^[26]— It is *Tikshana* (sharpness) and *Ushna-Virya* (hotness), It stimulates Lungs, Heart, therefore it is useful in Bronchial *Asthama*, bronchiectasis, in conditions of *Kapha Sanchaya* (accumulation of phlegm). If *Kapha* is situated in the lungs and lungs are unable to expectorate or due to weakness in lungs in such conditions *Mallasindoor* is very effective. Due to its *Ushna and Tikshanatva, Mallasindoor* is not advisable

in high-grade fever which may exacerbate the disease. In Pneumonitis on later stages where due to weakness of lung, Respiratory rate is decreased *Malla Sindoor* is useful medicine. *Mallasindoor* is contraindicated in *Pitta Bhuyishthadi Vikar* (disorders caused due to aggravation of humour *Pitta*) and children.

- Mallasindoor and Panchasuta Rasayanas are Kaphasanshodhaka (cough purifier), but Panchasuta Rasayana is not as Tikshana and Ushna as Mallasindoor. It effective in Pleural effusion/ pleuritis.^[27]
- Panchasuta is also used in Asthama. It is contraindicated in Shushka Kasa Yukta Pittaj Shawas (dry cough incorporated with breathlessness) or where there is no Kahapha Strao (secretion of mucous). Here Sameerpanaga acts as a mucolytic agent and thereby giving relief to the patient. Manikya rasa cures especially dry cough & repeated episodes of cough.^[28]
- Abhragarha Pottali rasa can be used in diseases where etiopathogenesis is due to obstruction in channels (Strororodhjanya Samprapti), Jwara (fever), Shwasa (respiratory disorders), Udar, Sangrahani (Intestinal disorders), etc.
- *Pachasuta* is liver stimulating, when any disease has occurred due to impairment of the liver *Panchasuta* is beneficial in acute conditions. [28]
- When there is a decrease in specific gravity of urine of *Prameha* patient complaining about frequent urination in such kind of condition *Manikya Rasa* is very good. *Manikya Rasa* stimulates and replenishes ureters, kidneys, urinary bladder, etc.
- *Hiranyagarbha Pottali Rasa* is very useful in *Kapha Pradhan Vyadhi* (disorders due to aggravation of Humor *Kapha*), when the condition of disease exceeds to *Sannipata* stage in disorders of *Kshaya, Kasa, Shwasa,* Hemiparesis, *Sangrahan*i, and even heart diseases.
- Loha Bhasma in Lohagarbha Pottali Rasa is Uncutous, Tridoshaghna, Aamdoshaghna, Balya,

thus useful in Anaemic conditions such as Sickle cell Anaemia, Spleenomegaly, Haemorrhoids, etc.

• *TamragarbhaPottaliRasa*, contains *Tamra Bhasma* which is *Madhur Vipaki*, *Ushnavirya* has scrapping properties, is useful in liver disorders, Spleenomegaly, weak digestion, and disorders associated with obstruction in channels due to vitiated *Kapha Pitta*.

According to modern medicine use of mercury is believed to be toxic for kidneys, but various Samskaras on Rasa Dravyas (metals, minerals, gems) during the process convert them to non-toxic, palatable, having therapeutic properties. For instance, Makardhwaja is an Ayurvedic formulation that is prepared using Mercury, Gold, etc. But when studies were conducted on it, the drug was found not to be nephrotoxic but protective to the kidneys from nephrotoxins.^[29]. Modern medicines are proving insufficient for curing disease, many of them provide only symptomatic relief or acts as a placebo and also causing deleterious effects on the body on long time consumption. In this way, all KPR and PTR can be used judiciously in many non-curable, complicated, dreadful diseases. By special process of purification of mercury, the toxicity of the mercury is up to that extent minimized, where mercury becomes edible and converts its inherent property for healing of the human body ailments.^[30]

CONCLUSION

KPR & PTR are miraculous medicines that have been neglected over the centuries maybe for the cost and typical preparatory procedures involved. Due to this reason, they did not get the limelight. KPR & PTR *get* absorbed quickly and act as a metabolic catalyst, thus carrying the herbs they contain directly to the cellular level. The efficacy of some *Rasa* preparations increases over time has no expiry date. The advantage of KPR & PTR is the a) preservation of *Rasa* medicines is much easier than herbal preparations. b) The taste of KPR & PTR is generally neutral. c) *Rasaaushadhis* are easy to administer.

Advanced analytical techniques can be useful for the characterization of *Rasa* preparations, but they fail to

give information regarding its pharmacodynamics. The concept of the increased potency of KPR & PTR with the increase in the proportion of *Gandhaka* added could not be proved analytically despite using the modern, sophisticated instruments though it has to be proved clinically. Appropriate selection of *Anupana* (adjuvants) as per classic literature enhances the efficacy of these *Rasa Aushadhis* according to disease, *Prakruti, Bala, Vaya* (age), and selection of proper drug one can fight almost every infectious disease using *Rasa Aushadhis*. Keeping all the above concepts in mind, judicial utilization of KPR & PTR is the need of the hour in Ayurvedic practice. To full fill these criteria clinical research may be carried out.

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