

SIGNIFICANCE OF RASAKALPAS IN RELEVANCE WITH AYURVEDIC PHARMACOTHERAPEUTICS (*RASASHASTRA*) IN THE MANAGEMENT OF MALE INFERTILITY

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ABSTRACT

Ayurvedic Pharmacotherapeutics have an altogether different approach towards management of Male Infertility. It is not solitarily dependent on *dosh-dushya samurchana*. In this system of medicine, *Parada* (Mercury) a backbone of *Rasashastra* has been blended with different potent Herbs, Minerals and drugs of animal origin by specialized pharmaceutical procedures. *Rasakalpas* are very well known for small drug dose, enumerable formulations, palatability and quick action. In this study, the role of *Rasakalpas* in Increasing Vigour and Vitality, Increasing Sperm count and enhancing Sperm count to treat Male Infertility have been studied from ancient texts. **Aim:** To explore utility of *Rasakalpas* in the management of Male Infertility. **Objectives:** 1.To study some of potent *Rasakalpas* for the management of different aspects of Male Infertility.2. To explore possible Pharmaco-therapeutical action of *Rasakalpas* in the perspective of Male Infertility. **Material & Method:** A review study of potent *Rasakalpas* has been carried out from different *Rasagranthas* regarding their pharmaceutical procedures, indications, drug dose, mode of administration, *anupana*, mode of action etc. in the perspective of management of Male Infertility. **Conclusion:** *Rasakalpas* are the multifaceted combination of *Parada* and other *Rasaushadhis* which are well known for their *Rasayana* action helps in improving quality and quantity of sperm

Keywords: *Rasakalpas*, *Rasashastra*, Male Infertility

INTRODUCTION

Infertility is “a disease of the reproductive system defined by the failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse.¹The causes of Male infertility ranges from hormonal imbalances, to physical problems, to psychological and/or behavioural problems and ill habits

Ayurvedic classics describe infertility as *klaibya* or *Napunsakata*. If a person is unable to perform sexual intercourse

with his partner then it is termed as *Klaibya*.² Causes of Male Infertility are *Akaal Yonigaman*, *Nigrahat* (Suppression of Urge for coitus), *Atimaitun* (Over indulgence in sexual activity), *Shastraksharadikarma* (Injury to genitalia), *Asatmyanam cha sevana* (Eating improper food), *Ayonau* (Indulging into sex other than natural ways) and other causes like fear, sorrow, stress.³ Ayurvedic Pharmacotherapeutics have an altogether different approach towards management of Male

Infertility. It is not solitarily dependent on *dosh-dushya samurchana*.⁴ In this system of medicine, *Parada* (Mercury) a backbone of *Rasashastra* has been blended with different potent Herbs, Minerals and drugs of animal origin by specialized pharmaceutical procedures. *Rasakalpas* are very well known for small drug dose, enumerable formulations, palatability and quick action.⁵

In this study the role of *Rasakalpas* of 1. *Kharaliy Rasayana* 2. *Parpati* 3. *Kupipakva* 4. *Pottali* formulations are reviewed from different *Rasagranthas* for their activities in increasing vigour, enhancing sperm quality, increasing sperm quantity etc. to treat Male Infertility.

AIM: To explore utility of *Rasakalpas* in the management of Male Infertility.

OBJECTIVES:

- To study some of potent *Rasakalpas* for the management of different aspects of Male Infertility.
- To explore possible Pharmacotherapeutical action of *Rasakalpas* in the perspective of Male Infertility.

MATERIAL & METHODS:

Modern system of medicines categorized the causes of male infertility as a) Sperm Production Problem in testis b) Blockage of Sperm transport due to obstruction in the tubes leading sperm away from the testes to the penis c) Production of sperm antibodies due to injury, vasectomy etc d) Sexual Problem due to ejection or ejaculation e) Harmonal Problems⁶ The Treatment modalities adopted in modern medicine for the management of male infertility is either surgical correction to remove obstruction or treatment with human chorionic gonadotropin (hCG), recombinant human follicle stimulating hormone (rhFSH), also called gonadotropin treatment⁷.

In *Ayurvedic* texts, the male sexual dysfunctions have been described as *Klaibya*. It is of seven types.⁸

1. *Manasik klaibya* (Impotency/Infertility due to Psychological disorder)
2. *Pittaj Klaibya* (Impotency/Infertility due to vitiated Pitta dosha)
3. *Veeryajanya Klaibya* (Impotency/Infertility due to improper Sperm)
4. *Rogjanya Klaibya* (Impotency/Infertility due to diseases)
5. *Shirachedjanya Klaibya* (Impotency/Infertility due to disorders in spermatid duct)
6. *Shukrastambhyanja Klaibya* (Impotency/Infertility due to non conduct of sexual intercourse)
7. *Sahaj Klaibya* (Congenital Impotency/Infertility)

Vajikarana (Aphrodisiac), branch of *Ashtanga Ayurveda* deals with fertility, potency and healthy progeny. In this branch rejuvenative and aphrodisiac medicines and psychological behaviour modificatory procedures are prescribed to improve vigour, vitality of individual and quantity and quantity of sperm. In *Ayurveda* the Male Infertility can be treated by two types of treatments 1) *Shodhan Chikitsa* (Cleansing Therapy) 2) *Shaman Chikitsa* (Drug Treatment)⁹ In *shodhan Chikitsa* Panchakarma therapies like *Abhyanga* (Whole Body Massage with medicated oil), *Shirodhara* (Pouring of Medications over head) *Nasya* (Insertion of medication through nostrils) enforces physical and mental relaxation. *Uttarbasti* plays an important role in obstructive pathologies in male infertility.

Classics of *Rasashastra* follow altogether different approach for management of ailments. They suggest the use of potent *Rasaushadhis* for management of diseases without giving much importance

to *dosh-dushya sammurchana*. These *Rasas* are because of their potent ingredients and specialized Pharmaceutical procedures acquires exceptional properties of curing diseases. A review study of potent *Rasakalpas* has been carried out from different *Rasagranthas* regarding their phar-

maceutical procedures, indications, drug dose, mode of administration, *anupana*, mode of action etc. in the perspective of management of Male Infertility. It is summarized in following table

Table I : Important Rasakalpas in Male Infertility

S r N o	Name of <i>Rasakalpa</i>	Type	Ingredients	Dose & <i>Anupana</i>	Indications
1.	<i>Pushpadhanwa Ras</i> ¹⁰	<i>Khara-liy</i>	<i>Rasasindura</i> <i>Nagbhasma</i> <i>Lohbhasma</i> <i>Abhrakbhasma</i> <i>Vangabhasma</i> <i>Bhavana Dravya:</i> <i>Dhaturapatra Swaras, Bhanga Kwath</i> <i>Yashtimadhu</i> <i>Kwath</i> <i>Shalmali Swaras</i>	120 mg, Honey, Ghee and Milk	<i>Shishnashaithilya after ejaculation, Shukravahini Balkarak, Shaithilyanashak</i>
2.	<i>Purnachandroda Rasa</i> ¹¹	<i>Khara-liy</i>	<i>Rasasindura</i> <i>Abhrakbhasma</i> <i>Lohbhasma</i> <i>Shilajeet</i> <i>Vidang Churna</i> <i>Swarnamakshik Bhasma</i>	120-250 mg Honey and Ghee	<i>Rasayan, Vayasthapak Shukrakshay</i> <i>Premature Ejaculation</i> <i>Daurbalya</i> <i>, Napuskatva</i>
3.	<i>Vangeshwar Rasa</i> (<i>Brihat Bhaishajya Ratnakar</i>) ¹²	<i>Khara-liy</i>	<i>Shudha Parada- 10gm</i> <i>Rajat Bhasma- 10gm</i> <i>Vanga Bhasma- 10gm</i> <i>Abhrakbhasma- 10gm</i> <i>Suvarna Bhasma- 3 mashe</i> <i>Moti Bhasma- 3 mashe</i>	120-250 mg Honey and Milk	<i>Rasayan, Vayasthapak Shukrakshay</i> <i>Premature Ejaculation</i> <i>Daurbalya</i> <i>, Napuskatva</i>
4.	<i>Hemasundar Ras</i> ¹³	<i>Khara-liy</i>	<i>Rasasindur- 1 Part</i> <i>Suvarna Bhasma- ¼ part</i>	120 to 180 mg Milk, Butter,	<i>Rasayan</i> <i>Vajikaran</i>

				Curd	
5.	Chandrodayma-kardhwaj ¹⁴	Khara-liy	Suvarna Bhasma-1 Masha Rasasindur- 2 Mashe Kasturi- 1 masha Jayphal-1 tola Lavang- 1tola Bhimseni kapur- 1 tola Marich - 1 Tola	240 mg	Vajeekar Balavardhak Veeryavardhak Agneevardhak
6.	Manmathabhra-ras ¹⁵	Khara-liy	Gandhak, Abhrak Bhasma, Tamra bhasma, Loh bhasma, Vanga bhasma and other herbal drugs	250 mg with warm milk	Shukravardhak Balavardhak Vajikar
7.	Maheshwar Ras ¹⁶	Khara-liy	Rasasin-dur, Gandhak, Loh Bhasma, Tamra Bhasma, Abhrak Bhasma, Suvarna Bhasma and other heble drugs	125mg with water	Ksheen Veerya, Balavardhak
4.	Rasasindura ¹⁷	Kupi-pakva	Shudha Parad-1 Part Shudha Gandhak-1part Bhavana- Vatankur Swarasa	120 mg Musali Churna, Shalmali Churna	Rasayan, Kamodeepak, Rativilasak, Balakanteeprad, Vajeekaran,
5.	Sidha Ma-kardhwaja ¹⁸	Kupi-pakva	Shudha Parad-1 Part Shudha Suvarna – 4 Part Shudha Gandhak-8part	120 mg Musali Churna, Shalmali Churna with honey	Napuskatva, Rasayan, Kamodeepak, Rativilasak, Balakanteeprad, Vajeekaran
6.	Suvarnavanga ¹⁹	Kupi-pakva	Shudha Vanga+ Shudha Parad+ Amla dravya mardan+ Saindhav + Shudha Gandhak+ Navasadar	120 mg With honey	Napuskatva, Rasayan, Kamodeepak, Rativilasak, Balakanteeprad, Vajeekaran
7.	Rasaparpati ²⁰	Parpati	Shudha Parad-1	120 -240mg	Rasaya-

			Part Shudha Gandhak- 1part	Takra Dugdha Jal	na,Kamashukravardh ak, dourbalya, Shak- teevardhak
8.	Suvarna Parpa- ti ²¹	Parpati	Shudha Parad-80 gm Shudha Suvarna – 10gm Shudha Gandhak- 80gm	120 to 360mg Takra Dugdha Jal	Rasaya- na,Kamashukravardh ak, dourbalya, Shak- teevardhak
9.	Hemgarbha Pot- tali ²²	Pottali	Rasasindura-3part Suvarna Bhasma- 1part Tamra Bhasma- 1part Gandhak-1part	15mg-120 mg Pippali and Honey	Rasayan,Vayasthapak Shukrakshay Premature Ejacula- tion Daurbalya
10.	Retorodhan Pot- tali ²³	Pottali	Akkalka- ra,Jaiphal,Jaipatri, Ela, Kasturi, Ke- shar,Hingu each 1part	15mg-120 mg	Rasayan,Vayasthapak Shukrakshay Premature Ejacula- tion Daurbalya
11.	Vanga Bhasma ²⁴	Bhas- ma	Shudha Vanga Shudha Parada	120-240mg Butter with Guduchi Satva	Rasayan Increases Vigour for sex, Prevents Nocturnal emission, Shukrakshay Premature Ejacula- tion Daurbalya
12.	Trivanga Bhasma ²⁵	Bhas- ma	Nagbhasma,Vanga Bhasma,Yashad Bhasma each in equal part Bhavana- Bhang and Ahifen	120-240mg Butter and Honey	Veeryavardhak Napuskatva,Rasayan, Kamodeepak, Rativi- lasak, Balakantee- prad, Vajeekaran
13.	Suvarna Bhasma ²⁶	Bhas- ma	Shudha Suvarna Foils &Shudha Pa- rada in equal amount + Nimbu Swaras Bhavana+ Shudha gandhak		Rasayan,Vayasthapak, Varnaprasa- dak,Phirang , Vajee- karan etc

DISCUSSION

Rasakapas are complex mixture of *Parada* and other potent *dravyas* prepared by specialized pharmaceutical procedures described in ancient texts. *Parada* is well known for the properties like *Yogavahi*, *Sukshmasrotogami*, *vyavayi* etc. It is well known as *Rasayana* which with above mentioned properties nourishes all the *Rasarakta* of human body and makes it powerful. *Shukra dhatu* being seventh *dhatu* and gets its completeness after nourishment of other six *dhatu*s, *Parada*'s above mentioned properties make it very potent which in turn helps to improve quality and quantity of sperms

From Table II it is quite clear that *Rasaushadhis* prescribed in male infertility in *Rasagranthas* are multi-centric in curing male infertility. The herbo-mineral ingredients in *Rasaushadhis* are helpful in treating general debility, Increasing Sperm count, normalizes *shukravaha srotas*. These formulations requires small drug dose but are quick acting. Rajeev Kumar et al carried out a double blind randomized

placebo-controlled trial on fifty infertile men with iOATS (oligoasthenoteratospermia) to check the efficacy of *Addyzoa capsule* a herbomineral compound containing mineral origin drugs *Purnachandroday Rasa*, *Muktashukti bhasma*, *Suvarna Makshik Bhasma*, *Makardhwaj Rasa*, *Rasasindura* etc and other herbal drugs. Drug was administered at a dose of two capsules twice a day for 3 months. Treatment with *Addyzoa* resulted in a significant improvement in total and progressive motility in the semen of men with idiopathic OATs after 3 months of therapy. Renata Walczak–Jedrzejowska et al in their In vitro and in vivo studies reveals, many antioxidants possess a beneficial effect on fertility and therefore their use is recommended as supportive therapy for the treatment of infertility in men.

Recommended daily allowance (RDA) of minerals with antioxidant effect According to the European Commission Directive 2008/100/EC from 28 October 2008

Table II Recommended Dietary Allowance of Minerals

Sr No	Mineral	RDA
1	Zinc	10 mg
2	Selenium	55 µg
3	Copper	1 mg
4	Chrome	40 µg
5	Magnesium	2 mg
6	Iron	14mg

Both of these recent studies are suggestive of efficacy of herbomineral compounds are supportive in treating male infertility.

In *Rasakalpas* with *parada* there are other drugs like *Bhasmas*, *Kupipakva Rasayana* which because of their specialized pharmaceutical procedures acquires nano particle size. Nano particle sized

medicine absorbs quickly and helps in nourishment of all *dhatu*s and eradication of diseases. These *Rasaushadhis* contains minerals like copper, iron, magnesium, zinc etc which are well known for their antioxidant properties. These properties make person suffering from Male Infertility more potent which in turn improves his

Psychological confidence and enhances vigor and Vitality.

CONCLUSION

Rasakalpas are the multifaceted combination of *Parada* and other *Rasaushadhis* which are quick acting, palatable, small dose making them drug of choice among *vaidyas* and *Rugnas*.

In *Rasakalpas Parada* and other potent drugs are blended together and subjected to specialized pharmaceutical procedures described in *Rasagranthas* (e.g. *Jarana, Murchhana* etc) which make *Rasakalpas* nano particle sized, *Yogavahi, Sukshmasrotogami, vyavayi* helping in improving quality of *saptadhatu* and improves quality parameters of *Shukradhatu* (Semen)

The ingredients used in *Rasakalpas* are predominantly *Rasyana* drugs containing minerals which are well known for their antioxidant properties. They nourishes all the dhatus and increases quantity and quality of *Shukra Dhatu* (Semen). *Rasayna* drugs provides *Aayu, Kam, Bal, Varna* etc. and make human more potent. This improves his Psychological confidence and enhances vigour and Vitality which is essential for treating Male Infertility

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