

REVIEW OF MAKARDHWAJA RASA IN INFERTILITY

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ABSTRACT

Infertility is defined as a failure to conceive within one or more years of regular unprotected coitus. According to Ayurveda, conception takes place due to healthy sperm, healthy ovum, and a healthy uterus. Thus infertility depends on the defected fertility potential of both the male and female partner. Treatment principles include evaluating and treating the cause accordingly. *Rasa oushadhi* (metallic and mineral preparations) have most important role in quickly curing infertility. One such preparation is *Makaradhwaja Rasa*. **Objective:** to review the importance of *Rasa aushadha* w.s.r *Makaradhwaj Rasa* to cure infertility. **Material and methods:** literary study is done using *Charak Samhita*, *Sushrut Samhita*, *Bhaishajya Ratnavali*, *Ras Ratna Samucchaya*, *Ras Tarangini*, *Ras Prakasha Sudhakar*, *Rasamrita*, *Rasendra Sar Sangraha*, and *Bhav Prakash Nighantu*. **Discussion:** The *Makaradhwaja* contains *Shuddha Swarna* (Purified Gold), *Shuddha Parada* (Purified Mercury), *Shuddha Gandhaka* (Purified Sulphur), triturated with *Karpasa swarasa* (juice of flowers of *Gossypium herbaceum*) and *Kumari swarasa* (juice of Aloe vera plant). The *swarna bhasma* is aphrodisiac, cardiac tonic, promoter of eye – sight as well as intellect and rejuvenating. *Parada* has *yogavahi* property (incorporating and enhancing the properties of drugs with which it is used). *Gandhaka* is rejuvenating agent, *yogavahi*, aphrodisiac, alleviates *kapha*, *vata*. *Karpasa pushpa* has *saumanasyajanana* effect (soothing to mind), an essential factor for *garbha dharana* (conception). *Kumari* increases the blood circulation to *garbhashaya* (uterus). **Conclusion:** This review highlights that the *Makaradhwaja rasa* is an effective drug for infertility.

Keywords: *infertility, parad, gandhak, swarn bhasma, makaradhwaja rasa*

INTRODUCTION

Stree bandhyatwa or female infertility hinders the progeny. The aetiological factors include the defect in the union of sperm and ovum during fertile period.

The contributing factors to this are defect in uterus, cervix and fallopian tube, defect in ovulation and in hormonal function.¹

Klaibya or impotency is the inability to obtain or maintain an erection. It is a condition where physical, environmental, psychological, pathological, and

emotional along with many more factors are involved.

Treatment principles includes evaluating and treating the cause accordingly like

1. *Vandhyata chikitsa* (treating infertility)
2. *Anartava chikitsa* (treating Amenorrhea or anovulatory cycle))
3. *Garbhasaya balya chikitsa* (strengthening reproductive system)
4. *Bijadosha chikitsa* (treating the quality of semen and ovum)
5. *Vrishya or Vajikarana oushadha* (aphrodisiac treatment)
6. *Madhura – brumhana oushadhas* (nourishing treatment to both female and male)
7. *Apananulomana oushadhas* (carminative treatment)
8. *Pumsavana oushadhas* (treatment for best progeny)
9. Psychotherapy etc.

Vajikarana/vrushya chikitsa:

It is one among *Ashtangas* of *Ayurveda* (eightfold branches of Ayurvedic science) which deals totally about sexual health. As said by *Charaka*, the man without child is said to be a tree without any branches², the main aim of *vajikarana* is to do produce the quality progeny.

Shabdostomahanidhi defines *vrushya* as a substance which is helpful to fulfil the deficiency of libido. Literally, the word “*vrushya*” denotes the drugs which can potentiate sexual vigour or promote *shukra* (seminal parameters/ plasma) or both (S.K.D.4.491)³.

The following are considered as equivalent terms of *vrushya*⁴.

1. *Shukra srutikara* (increasing sexual desire)
2. *Shukra vriddhikara* (enhancing spermatogenesis)
3. *Shukra sruti – vriddhikara* (possession of both the above properties)

Shukra srutikara dravyas stimulate the brain and then the sexual organs. They don't interfere in the production of *shukra*. Their effect is mostly at the

psychic level. It is assumed that they stimulate the sex centre of the brain followed by excitation of sexual organs and finally “*shukra visarga*” (discharge)

Eg: *akakarabha, kasturi, gunja*. “*sankalpa*” (strong determination) has been mentioned by *Acharya Charaka* as *Shukrasrutikara*.

Shukra vriddhikara dravyas which enhance the production of *shukra* qualitatively and quantitatively come under this category. So, the *dravyas* bearing properties similar to that of *shukra* are taken as *shukra vriddhikara dravyas*.

Eg: *masha, nakra retas* etc.

They can be classified into two groups:

- *Sadya shukra vriddhikara*: these drugs produce the *shukra* by undergoing the normal process of *dhatu utpatti*(metabolism) and produce *shukra* in a very short period after ingestion. Action of such *dravyas* cannot be explained because it is brought about by their “*prabhava*” eg: *ksheera, ikshurasa*.
- *Kramansha shukra vriddhikara*: these types of drugs produce *shukra* passing through the normal process of *dhatu utpatti*. *Shukra* being the terminal *dhatu* a greater time period is required for its production by these drugs.

Shukra srutivruddhikara dravyas bestowed with both the above said properties are *shukra srutivruddhikara dravyas* eg: *ksheera, shatavari, ashwagandha*.

On the whole it can be said that *vrushya* drugs are those, which can enhance the spermatogenesis or sexual vitality or both.

Among *vrishya / vajikarana chikitsa Rasa aushdhis* have most important role to play. One such effective preparation is ***Makaradhwaja rasa***. *Charaka* says “*nakra retaso vrishyanam*” ie *nakra retasa* is best for fertility⁵. *Nakra* refers to *makar* or crocodile; *Dhwaja* refers to *veerya / shukra*, therefore the preparation which gives the power of fertility like *makar* is *Makaradhwaja rasa*.

The term *Makaradhwaja* is a synonym of *kama deva*, the god of lust and love. *Makaradhwaja rasa* is an

important metalo-mineral formulation of which herbs are also as inevitable and vital part and is an effective *kupipakva* preparation (a specific type of pharmaceutical practice in which medicines are prepared by gradually increasing heating patterns using a vertical electric muffle furnace).

The main components⁶ are *Suddha Swarna*(purified gold), *Suddha Parada* (purified mercury), *Suddha Gandhaka*(purified sulphur) in the ratio 1:8:24 and levigated with herbal juice like *Kumari Swarasa* (juice of *Aloe Vera Barbadensis*) and *Rakta Karpas Pushpa Swarasa*.(juice of *Gossypium Herbaceum*).

MATERIALS AND METHODS:

Here, the sources of data’s for conceptual study are taken from *Charak Samhita, Sushrut Samhita and Bhaishajya Ratnavali. Rasendra Sar Sangraha* is selected as the main reference text for the Makardhwaja Rasa.

Mineral drug review is done with the help of different Ras Granth’s like *Ras Ratna Samuchhaya, Ras Tarangini, Ras Prakash Sudhakar* etc. The herbal

drug review is done with the help of *Bhav Prakash Nighnatu*. Internet browsing from Google Scholar and Pub Med is done to find out reported aphrodisiac activity of the drugs.

All these data’s are put together, analysed and interpreted to understand the concept of *Makardhwaj Rasa* application in *Bandhyatva* (infertility)

OBSERVATIONS:

Review of each component:

Shuddha Swarna:

Swarna is considered superior among all metals and is kept under *saar lauha* group (essence or noble metal). It has been used in calcined form (*Swarna Bhasma*) in debility and sterility. It is considered as best rejuvenator which promotes longevity and prevents ageing. The *Swarna Bhasma* is sweet in taste and *vipaka*. It is aphrodisiac, cardiac tonic, promoter of eye –sight as well as intellect and rejuvenating. It counteracts the toxins⁷.

Therapeutic efficacy of *Swarna Bhasma* as described in Ayurveda classics^{8, 9,10,11,12}

Table 1: Therapeutic Action of Swarna Bhasma

Reference	Qualities
<i>Rasa Ratna Samuchhya</i>	<i>Kshayahara, Agimandyahara, Ojo-dhatu vivardhana, Balakara,</i>
<i>Rasa Prakasha Sudhakara</i>	<i>Saundarya kanti vardhan, Tridoshaja roga hara</i>
<i>Ayurveda Prakasha</i>	<i>Vrishya , Balya , Rasayana , Bruhmana, Ayushya</i>
<i>Rasa Tarangini</i>	<i>Vrishya , Punsanopyogi</i>
<i>Rasamruta</i>	<i>Rasayana , Vishaghna , Medhya</i>

The time tested properties of *Swarna Bhasma* are being proved once again by modern researchers through various studies¹³ which proves that *Swarna Bhasma* has:

1. Free radical scavenging activity
2. Anti anxiety and anti- depressant activity
3. Effect on reproductive function in immature female albino rats – significant increase in ovarian and uterine weight and elevation of serum estradiol level were observed following gold chloride (0.2 mg/kg body wt/day) administration in immature female albino rats. Histological study of

ovary also showed graffian follicle with ovum in rats proving stimulation of reproductive functions.

4. Effect on modulation of the immune response

Shuddha Parada:

Parada has *yogavahi* property which incorporates and enhances the properties of drugs with which it is used. *Parada* is best *Rasayana* for *Dehavada* (rejuvenation) as well as *Dhatuvada*(converting lower metals to noble metals) *Mruta Parada* (calcined form of mercury) is *kshaya- shoshhara*(relieves debility), *balya* (strengthens body), *veerya – anand*

vriddhikara (increases sexual desire), *kantivardhana* (increases luster), increases *stri ramana shakti* and *vihara shakti* (i.e. sexual vigour), it is told as *adhidevata* of *strivashikarana mantra*. (Promoter of lust)¹⁴

Shuddha gandhaka:

Gandhaka is pungent in taste, hot in potency and sweet in *vipaka* (post digestive effect). It is rejuvenating agent, *yoga vahi*, “*sutendra veeryaprada*”, (when added with *Parada*, it enhances its therapeutic power) aphrodisiac, alleviates *kapha* and *vata*¹⁵

Here, excess *Gandhaka* is assimilated / digested in *Parada* to form a therapeutically extremely effective compound; a polysulphide form probably is termed as *gandhaka jarana* which plays an important role in detoxification of mercury. It has been claimed that *Parada* without the process of *Gandhaka Jarana* cannot be able to cure the diseases, so it must be digested with *Gandhaka* to make it highly effective i.e. .to acquire many pharmacological and therapeutic properties.¹⁶

Bhavana dravya

1. ***Kumari swarasa***: *Kumari*¹⁷ - Literally means 'like a young girl or virgin' as it imparts the energy of youth to the reproductive system.

Kumari increases the blood circulation to *Garbhashaya*. (Female reproductive system)

Taste: Bitter, astringent, pungent

Attribute: Slimy

Potency: Cooling

General action: Tonic, aphrodisiac, rejuvenating

Special action: Rejuvenating

2. ***Rakta karpasa Pushpa swarasa***¹⁸ :

Taste: sweet

Attribute: light

Potency: *kinchita ushna*

General action: *vata nashaka*

Special action: *Saumanasyajanana* effect, an essential factor for *garbha dharana*.

Anupan:

1. ***Nagavalli swarasa***¹⁹ :

Special action: *Deepana*, *pachana*, *sugandhi*, *vrushya*

2. ***Dugdha***²⁰:

Special action: *Sadya shukravriddhikara*

3. ***Madhu***²¹:

Special action: *Vrushya*, *Yogavahi*

DISCUSSION

Vajikarana is a specialised treatment modality of Ayurveda and proposed benefits are manifold including increased sexual capacity, improving health of future progeny as well as in treatment of many common sexual disorders like infertility, erectile dysfunction and premature ejaculation. *Vajikarana* drugs also act as *Rasayan* and have the capability to revitalize all the body elements and restores equilibrium and health. It is a special category of *Rasayan*, which improves the reproductive system and enhance sexual function.

One such *Vajikaran* drug is *Makardhwaj rasa*. In this study each ingredients are evaluated on the basis of classical as well as research updates. Considering their medicinal properties and pharmacological actions it is evident that they contribute to aphrodisiac activity.

Here, mineral and herbal drugs act on synergism which makes the formulation potent enough to treat the infertility. For instance, *Vrushya* property of *Swarna* is well incorporated through *yogwahi* property of *Gandhak Jarit Parad*, *Bhavana samskar* with dravyas like *Kumari* and *Rakta Karpasa Pushpa swarasa* leads to possible formation of organ metallic compounds and converts heterogeneous form into homogenous form, macro to micro form, rough to smooth form of drugs.

This process of impregnation helps in reducing the particle size of the drugs thus increasing their capacity for absorption into the system. These herbal drugs in the form of juice impart their own therapeutic effects to these metals during processing like *Garbhashaya Balyakara* and *Saumanasyajanana*.

Nagavalli swarasa, *Dugdha* and *Madhu* as *Anupan* play a major role in potentiating drug action through their *Rasa*, *Guna*, *Virya*, *Vipaka* and *Prabhav* as well as improvement of *Roga bala* and *Rogi bala*.

Other than this, these also help in palatability, easy administration and prevent irritation and can also control adverse drug effect.

CONCLUSION

Infertility is defined as inability to conceive even after one year under normal marital relation without contraception. In Ayurveda, this condition is considered as *Vandhyatva*. This depends on the defected fertility potential of both the male and female partner.

Treatment principles include *Vandhyata chikitsa/ Anartava chikitsa/Garbhasaya balya chikitsa / Bijadosha chikitsa/ Vrishya- vajikarana oushadha*.

Among these treatment principles, Rasa preparations have significant role to play. One such formulation is *Makardhwaj Rasa*. It is mentioned under *Kupipakwa Rasayan* (These are medicated preparations prepared in a specially designed glass bottle by gradual heating immersion in sand bath). This formulation is selected as the drug of review in infertility for the present study. To understand its mode of action, each ingredient are analysed with their classical references and research updates.

Thus, it is found that as the compound of these ingredients when administered along with Betel leaf, milk and honey, it has *vrishya* effect, with *trishoghna* property and immunomodulatory action. Thus it is an excellent recipe for positive health, longevity and an effective sex tonic to cure infertility.

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