



A CRITICAL REVIEW ON THE EFFICACY OF SHUDHA DHATU BHASMAS IN OLIGOSPERMIA W.S.R. TO RASA TARANGINI

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ABSTRACT

Rasashastra and Bhaishajya kalpana deals with minerals, herbo-mineral/ metallic and animal origin formulations with safety processing technologies having wide range of therapeutic efficacy, less dose, better palatability and quick action¹.

Shudha DHATU bhasma (swarna, Rajata, Lauha) prepared through shodhana and marana process are classically indicated for shukra kshaya due to their sukshma, yogavahi and rasa rakta sukra vardhaka properties.

In Ayurveda oligospermia correlated with ksina shukra², which arises due to impaired agni Vitiation of Vata and pitta doshas and obstruction of shukravaha strotas. Also caused by various factors³ like jara, vyadhi chinta, karma karshana, anashana etc. Acharya charaka describes shukra kshaya condition associated with physical symptoms Daurbalya, klaibya, mukhashosa, panduta, shukravisarga and shrama⁴.

Oligospermia⁵, defined as low sperm count is a significant factor in male infertility, factors such as Hormonal imbalance, Lifestyle disorders, Oxidative stress play a significant role in pathogenesis.

In this article an attempt is made to collect the details of shudha dhatu Bhasma which are unique Preparation of metals used in oligospermia according to Rasa Tarangini and to analyze the mode of action of these individual bhasma.

KEY WORDS: Shudha dhatu bhasma, Ksinshukra, Rasa tarangini, Oligospermia, Spermatogenesis

INTRODUCTION

Ayurveda provides a comprehensive explanation of male reproductive disorders under the concept of Shukra Kshaya / Ksheena Shukra, which is described as a pathological condition resulting from improper nourishment of Shukra Dhatu.

Male infertility is an emerging global health concern, with oligospermia being one of its most prevalent etiological factors. Oligospermia is clinically defined as a reduction in sperm concentration below normal reference values [LESS THAN 15 MILLION/ml] and is frequently associated with impaired spermatogenesis, oxidative stress, hormonal imbalance, and environmental influences.

Classical Ayurvedic texts emphasize that derangement of Agni, vitiation of Vata and Pitta Dosha, obstruction of Shukravaha Srotas and depletion of preceding Dhatus collectively lead to quantitative and qualitative deterioration of semen. The management of such conditions is primarily addressed through Vajikarana Chikitsa, which aims not only at improving fertility but also at restoring systemic strength and longevity.

Shudha Dhatu bhasma indicated in oligospermia

According to rasa tarangini

Sl.no.	Bhasma	Dose
1.	Swarna bhasma ⁶	1/8-1/4 ratti
2.	Rajata bhasma ⁷	1/4-1 ratti
3.	Lauha bhasma ⁸	1/4-2 ratti

Within Vajikarana therapy, Shudha Dhatu Bhasmas are regarded as potent formulations due to their Rasayana, Vrishya, Balya, and Yogavahi properties. Properly prepared Dhatu Bhasmas are believed to possess superior bioavailability and Sukshma Guna, enabling them to act at the cellular and metabolic level of Dhatu Poshana. Bhasmas such as Swarna, Rajata, Lauha, have been classically indicated as vrushya. Their therapeutic action is described in terms of Dhatu Vardhana, Ojas Poshana, and normalization of Dosha-Dhatu-Agni interactions. Rasashastra offers a holistic and potent therapeutic approach through bhasmas.

Bhasma, is an ayurvedic metallic/mineral preparation, treated with herbal juices or decoction and exposed for certain quantum of heat as per puta system of Ayurveda, which itself is well known in Indian subcontinent since 7th century A.D. and widely recommended for the treatment of many disease conditions. Bhasma are claimed to be biologically produced nanoparticles.

Classical formulations for oligospermia often include Bhasmas like Swarna bhasma, Rajata bhasma, lauha bhasma.



MATERIALS AND METHODS

. This critical review conducted to evaluate the efficacy of shudha dhatu bhasma in oligospermia with special reference to rasa tarangini

SHUDHA DHATU BHASMA PREPARATION

Dhatu Samanya shodhana:

तैले तक्रेगवां मूत्रे ह्यारनाले कुलथजे ।

DHATU VISHESA SHODHANA AND MARANA

Shudha Dhatu	Vishesa Shodhana	Marana
Swarna	Swarna patra coated with paste of pancamrttika with nimbu swarasa and subjected for kapota puta, this procedure repeated for 7 times	Shudha Swarna is amalgamated with shudha parada then triturated with shudha gandhaka and subjected for laghuputa, procedure repeated for 14 times
Rajata	Rajata patra heated red hot and dipped in Agastya patra swarasa, this procedure repeated for 3 times	Shudha rajata triturated with shudha parada, shudha gandhaka and ghrtakumari swarasa, then subjected for laghuputa
Lauha	Lauha patra heated red hot and dipped in kadalikanda swarasa, this procedure repeated for 7 times	Shudha lauha churna triturated with nimbu swarasa to prepare cakrikas and then subjected for gajaputa, this procedure repeated for 50 times

DISCUSSION

Oligospermia, a major contributor to male infertility, is correlated in Ayurveda with Kṣīṇa Śukra or Śukra-kṣaya, a pathological state arising due to Agni-mandya, Vāta-pitta vitiation Dhātu-kṣaya and Srotorodha. Since Śukra dhātu is the final and most refined tissue, its depletion reflects chronic impairment of metabolism and tissue nourishment. Therefore, the Ayurvedic management of oligospermia requires Rasāyana, Vṛṣya and Dhātu-var dhaka therapies rather than symptomatic treatment alone. In this context, Shuddha Dhatu Bhasmas, being highly potent, bioassimilable and Yogavāhī, are therapeutically significant.

The present review indicates that Dhatu Bhasmas such as Swarna, Rajata and lauha Bhasma possess multidimensional actions on the male reproductive system. From an Ayurvedic standpoint, these bhasmas are described as Rasāyana, Brmhāṇa, Balya and Vṛṣya, thus directly influencing Śukra dhātu utpatti and sthāiratva. Their Sūkṣma, Laghu and Vyāvāyī guṇas enable deep tissue penetration, correcting Śukravaha srotoduṣṭi and facilitating proper nourishment of testicular tissue

Swarna and Rajata Bhasma, have important immunomodulatory and antioxidant properties. Since oxidative stress and immune-mediated damage are key contributors to idiopathic oligospermia, these bhasmas may indirectly improve sperm quality by protecting germinal epithelium and stabilizing hormonal function. Their Ojas-var dhaka and Medhya actions also support the neuro-endocrine regulation of reproduction.

Lauha Bhasma exhibits significant Deepana-Pachana and Srotoshodhana actions, removing Āma and improving nutrient assimilation. Since Śukravaha srotoduṣṭi is a core pathology in oligospermia, Lauha facilitates proper delivery of nutrients to the testes and accessory glands, resulting in improved sperm production and quality.

क्रमात्रिषेचयेत्तप्तं द्रावे द्रावे तु सप्तथा ॥

स्वर्णादिलोहपत्राणां शुद्धिरेषा प्रशस्यते ॥ (R. R. S. 5/13)

The thin sheets (kaṇṭakavedhi patra) of these metals are heated red-hot over fire and dipped into the following liquids; 1. Tilataila 2. Takra 3. Gomūtra 4. Aranāla and 5. Kulattha kwātha for seven times; in total for one drug it will be 35 times of heating and dipping. This process will purify all the metals in general.

Probable Mode of action

1. Swarna bhasma⁹

Swarna bhasma. is described in classics as Rasayana, vrushya & balya

Dhatu Poshana enhances dhatvagni ensuring proper Formation & nourishment of Sukra dhatu. Vrushya karma improve semen quantity, quality and reproductive strength.

Rasayana effect prevents degeneration of reproductive tissue and supports longevity of Spermatogenic cell.

Antioxidant activity Reduces oxidative stress in testicular tissue a major cause of reduced sperm count and motility, spermatogenic stimulation protect germ cell and promote spermatogenesis.

Endocrine modulation Helps to regulate the hypothalamic pituitary - gonadal axis supporting testosterone secretion.

2.Rajata Bhasma¹⁰

Rajata bhasma possesses sita virya, Madhura vipaka and snigdha guna, Rasayana, medhya, balya & vrushya properties. With its Madhura vipaka it stabilizes pitta & vata doshas.

Medhya & Balya properties enhances cognitive function, reduces stress and anxiety indirectly benefiting reproductive and systemic health. Antioxidant activity scavenges free radicals, reducing cellular damage. Antiinflammatory effect modulates inflammatory mediators protecting tissues from chronic inflammation

3.Lauha bhasma¹¹

Lauha bhasm Stimulate jatharagni and dhatvagni leading to proper Formation of rasa rakta mamsa meda asthi majja shukra dhatu.



Shukra is formed from majja which is dependent on rakta dhatu, lauha bhasma is raktadhatu vardhaka improving tissue oxygenation and nutrition of testes.

Lauha bhasma act as srotoshodhaka, by clearing blocked channels of shukavaha strotas it ensures proper spermatogenesis.

Iron supports enzyme involved in testosterone synthesis, FSH and LH activity these hormones regulate spermatogenesis.

Vitiated vata causes low sperm count and motility pitta causes sperm damage, lauha bhasma balances both and stabilizes spermatogenesis.

CONCLUSION

Oligospermia, corresponding to Kṣīṇa Śukra in Ayurveda, is not merely a local testicular disorder but a systemic derangement of Agni, Dhātu-pariṇāma and Śukravaha strotas. Hence, therapeutic success depends on restoration of both metabolic and reproductive tissue integrity.

The present critical review demonstrates that Shuddha Dhatu Bhasmas—Swarna, rajata and Lauha—act at multiple levels of this pathophysiology, by correcting Rakta-dhātu depletion, cellular hypoxia and mitochondrial dysfunction, provides the metabolic and nutritional foundation essential for sustained Śukra-utpatti, they restore the entire biological axis of spermatogenesis, from digestion and tissue metabolism to hormonal regulation and cellular protection.

Shuddha Dhatu Bhasmas represent a scientifically rational and Ayurvedically holistic therapy for oligospermia, offering sustainable improvement in male reproductive potential rather than temporary symptomatic relief.

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