

## A REVIEW ON THE PRATINIDHI DRAVYA IN RASASHASTRA

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### ABSTRACT

Rasashastra is a science related to Ayurveda pharmaceuticals where formulations are designed using metals, minerals, gem stones, marine drugs, etc. These metals, gemstones, mineral drugs, etc. are used in Ayurveda pharmaceuticals; some of these drugs are very rare and expensive. In Ayurveda pharmacology and pharmaceuticals, use of substitute drugs is mentioned, in case of non-availability of the drugs. To get the desired property and therapeutic action the substitute drugs are added and the formulation is designed. The uses of substitutes selected are such that they give the desired benefit without compromising the efficacy of the end product. This concept is also found in the branch of Indian alchemy where the substitutes for a few drugs have been mentioned. The rasa dravyas for which substitutes have been mentioned are for gold, chalcopryrite, silver, etc. A literary review on the properties of the original drug mentioned and the substitute drug when reviewed highlights the fact, that the properties are very similar and will be a perfect alteration to the original drug mentioned. But as no research works have been carried out in this area to understand if the efficacy remains the same opens new arenas for works to be taken up in future.

**KEYWORDS:** Pratinidhi, substitute, swarna, swarnamakshika, rasashastra.

### INTRODUCTION

Rasashastra is the science of Indian alchemy where drugs of mineral, metallic, marine origin drugs, gemstones, etc. are used for the purpose of therapeutics. These drugs are subjected to purification, incineration, etc. before employing in various formulations.

Some drugs are very expensive, may not be available in few places or may not be affordable. To overcome these drawbacks substitute drugs have been mentioned in Ayurveda pharmaceuticals and this holds good even for rasadravya in Rasashastra as well. Thus, the concept of pratinidhi dravya is not restricted to plant drugs alone but one can come across the practice of it in rasashastra too, though only a few have been mentioned.

Swarna (Gold) is a noble metal that has the properties of rasayana, etc. The substitute for swarna is said as Swarnamakshika (Chalcopryrite). The author of Ayurveda Prakasha gives three reasons as to why swarnamakshika can be taken as a substitute for Gold. Firstly, as some part of gold is present in it. Secondly, it is said as upadhatu of swarna and gunas (properties) of swarna (Gold) are present in it. Thirdly, the author also opines that not just the properties of swarna (Gold) but also the properties of the other elements will also be there. In a nut shell as swarna (Gold) is present in swarnamakshika and as it has properties like swarna it can be taken as a substitute for gold.<sup>[1]</sup>

**Table 1: Properties of Gold & Chalcopryrite.**

Drug	Rasa	Guna	Veerya	Vipaka	Doshaghna	Karma
Swarna (Gold)	Kashaya (astringent), Tikta (bitter), Madhura (sweet) & Katu (pungent)	Sheeta, Guru (heavy), Snigdha (unctuous), Picchila (mucilaginous)	Sheeta (Cold)	Madhura	Tridoshaghna (alleviates all the doshas)	Balya (strengthens body), Rasayana (rejuvenation of body), Sakalamayaghna (useful in all disease conditions), Vrishya (aphrodisiac)
Swarnamakshika (Chalcopryrite) <sup>[2]</sup>	Tikta (bitter), Madhura (sweet)	Sheeta (cold), Laghu (light)	Sheeta (Cold)	Katu	Tridoshaghna (alleviates all the doshas)	Balya (strengthens body), Rasayana (rejuvenation of body), Sakalamayaghna, Vrishya (aphrodisiac)

The author of Bhavaprakasha and Bhaishajya ratnavali also opine in similar lines.

Rajata Makshika is said as a substitute for Rajata (Silver). Rupya makshika has similar gunas like rajata (Silver) as it is a upadhatu but the properties are less in comparison to rajata. Other than the properties of rajata

(silver), other gunas will also be present in it. Rupya makshika is madhura (sweet) and little tikta (bitter) in rasa, has madhura vipaka and is said as veerya vardhaka (increases vitality), rasayana (rejuvenative) and is indicated in kushta (skin ailments), pandu (anaemia), prameha (diabetes), visha (poisonous effect), etc.

**Table 2: Properties of Silver & Rupya makshika.**

Drug	Rasa	Guna	Veerya	Vipaka	Doshaghnata	Karma
Rajata <sup>[3]</sup> (Silver)	Kashaya (astringent), Amla (Sour), Madhura (Sweet)	Snigdha (unctous), Guru (heavy), Sara (Mobile), Sheeta (cold)	Sheeta (Cold)	Madhura	Vatapittajit (alleviates vata and pitta)	Lekhana, Vayasthapana (keeps one ageless), Ayuprada (prolongs life), Vayasthairyakara, Varnya (increases complexion), Vrishya (aphrodisiac), Ruchya, Medhya (increases intellect), Pushtikara (nourishing), Viryavardhaka (increases vigor), Rasayana (rejuvenative)
Rupya makshika <sup>[4]</sup>	Slightly Tikta (astringent)	Laghu (light), Ruksha (dry), Ushna (hot)		Madhura		Vrishya (aphrodisiac), Rasayana (rejuvenative), Chakshushya (beneficial to eyes)

Gairika (Red ochre) is another drug mentioned under the category of uparasa. It is said to be a substitute for swarnamakshika (Chalcopyrite) in Bhaishajya Ratnavali.

**Table 3: Properties of Gairika & Swarnamakshika.**

Drug	Rasa	Guna	Veerya	Vipaka	Doshaghnata	Karma
Gairika (Red Ochre) <sup>[5]</sup>	Madhura (sweet), Tikta (bitter), Kashaya (astringent)	Snigdha (unctous), Guru (heavy), Kathina (hard), Vishada (clear)	Sheeta (Cold)	Madhura	Pittashamana (alleviates pitta)	Vishapaha (alexeterics), Balya, Vranaropana (wound healing), Kandughna (anti- pruritic)
Swarnamakshika (Chalcopyrite) <sup>[6]</sup>	Tikta (bitter), Madhura (sweet)	Sheeta (cold), Laghu (light)	Sheeta (Cold)	Katu	Tridoshaghna (alleviates all the doshas)	Balya (strengthens body), Rasayana (rejuvenation of body), Sakalamayaghna, Vrishya (aphrodisiac)

Vaikranta (Tourmaline) can be taken as a substitute for Vajra (Diamond) based on its characteristic features and properties. A look on the features of vaikranta mentions as that which has eight edges, eight surfaces, smooth, heavy, clean, smooth is said to be superior and that

which possesses all the characteristics of Diamond is said to be best.<sup>[7]</sup> Apart from this Yadavji also mentions that uparatna vaikranta that is Tourmaline can be used as a substitute for diamond.<sup>[8]</sup>

**Table 4: Properties of Vaikranta & Vajra**

Drug	Rasa	Guna	Veerya	Vipaka	Doshaghnata	Karma
Vaikranta (Tourmaline) <sup>[9]</sup>	Shadrasa (possesses all six taste)	Guru (heavy)	Sheeta (cold)	Madhura	Tridoshaghna (alleviates all the doshas)	Ayuprada (longevity), Balavarnakara (increases strength and complexion), Ativrishya, Diptagnikara (increases digestive fire), Lohakari (useful in alchemy), Rasayana (rejuvenative), Pranaprada, Rasabandhakara (useful in binding parada), Dehadardyakara, Vishaghna (anti- poisonous), Rasaraja
Vajra (Diamond) <sup>[10]</sup>	Shadrasa (possesses all six taste)	Snigdha (unctous)	-	-	Tridoshaghna (alleviates all the doshas)	Ayuprada, Parama hrudya (cardiotonic), Yogavahi, Pradipana, Vayasthambaka

						(anti- aging), Kantijanana (increases complexion), Saukhyas, Rasayana (rejuvenative), Balaprada (increases strength), Netrya, Medhya, Rogaghna (prevents diseases), Mrutyuharana (avoids death), Sarvasiddhaprada (gets all siddhis), Rasabandhakara (useful in binding mercury), Rasamaraka (useful in incineration of mercury)
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Other than the above in Bhavaprakasha, in non-availability of Sourashtra, sphatika (alum) is a substitute, for Rasanjana (Yellow oxide of Mercury) - Daruharidra kwatha (decoction of Berberis aristata), for gold and silver- kantalooha bhasma (calcified ash of Iron), for Kantalooha bhasma- Teekshna loha and for pearl- oyster shell is said as a substitute.<sup>[11]</sup>

Kantaloha bhasma is said as rasayana, increases agni, and with the right anupana it is said to be useful in all

diseases. Swarna bhasma increases the ojas and bala (strength), and is said as vishapaha (anti- poisonous).

Mukta bhasma is sweet in taste, laghu (light) in guna and is sheeta veerya (cold in potency) and is said to be vrishya (aphrodisiac), ayushya (increases life span), netrya (beneficial to eyes), hrudya (good for heart), medhya (memory booster), vishaghna (anti-poisonous). Mukta shukti is useful in pittaja and raktaja rogas and in parinama shula, amlapitta, annadrava shula conditions.

**Table 5: Substitute drugs mentioned in Bhavaprakasha.**

Sl. No.	Drug	Pratinidhi dravya
1	Saurashtra	Sphatika
2	Rasanjana	Daruharidra Kwatha
3	Rajata	Roupya Makshika
4	Makshika	Swarna Gairika
5	Swarna & Rajata	Kantaloha bhasma
6	Kantaloha bhasma	Teekshna Loha
7	Mukta	Muktashukti

The author of Yogaratnakara, adds a few more substitute for drugs namely; in abhava of Parada bhasma (calcified ash of Mercury)- Rasasindura (Red sulphide of Mercury) is a substitute, for Rasasindura- Hingula (Mercury

Sulphide), for Vaidurya (Cat's eye) and other gemstones- Mukta bhasma (calcified ash of Pearl) is said as a substitute.<sup>[12]</sup>

**Table 6: Substitute drugs mentioned in Yogaratnakara**

Sl. No.	Drug	Pratinidhi dravya
1	Swarnamakshika	Taramakshika
2	Parada or Swarna	Loha bhasma
3	Kantaloha	Teekshna loha
4	Mukta	Muktashukti
5	Parada Bhasma	Rasasindura
6	Rasasindura	Hingula
7	Gemstone like Vaidurya, etc.	Mukta bhasma

Rasasindura is vrishya (aphrodisiac), balya (strengthening) and is useful in nadi dourbalyata (nervous weakness). Hingula is said as sarvadoshahara (pacifies all doshas), is rasayana (rejuvenative) and vrishya (aphrodisiac).

## DISCUSSION

The usage of metals, gemstones in formulations in Ayurveda pharmaceuticals especially as rasayana and for

emergency line of treatment is found in rasashastra. A few drugs are expensive and rare, hence substitutes must have been mentioned in texts of rasashastra to get its gunas (properties) in the formulation, thereby to achieve the desired result. Thus for a few drugs like gold, chalcopryrite, etc. substitutes have been mentioned.

A literary review to understand the properties of the drugs and compare its properties also has put light that

these drugs indeed have common properties and indications; and hence use of it in formulations will probably give the desired result than omitting the drug in the formulation.

## CONCLUSION

Use of substitute though not common for mineral drugs, but is mentioned in the texts. The substitute used in place of the original drug should have the same properties. The substitutes are used to get the required therapeutic property of the formulation that is prepared. As the properties and indications are same, the substitutes must have been mentioned. Substitutes have been mentioned for Gold, Silver, Iron in the category of Dhatus, in Maharasaarga for Chalcopyrite; in Uparasa group for Anjana and in Ratnaarga for Vajra, Vaidurya, Mukta and other gemstones. But, seldom research on this area is done in the field employing the substitute and determining the efficacy of the product. A lot of scope remains in this field for research to be carried out.

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