



A Literary Review on Swarnamakshika

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Abstract

Rasa Shastra includes various metals, minerals, precious and semiprecious stones etc. and their different characters along with therapeutic uses. Out of various minerals, Swarnamakshika is an important mineral. Swarnamakshika is grouped under Maharasavarga by different Acharyas before the 16th century but the Rasacharyas after 16th century have included the Swarnamakshika under Upadhatuvarga. Swarnamakshika is considered as "RasendraPrana" i.e. its usage is inevitable in various mercurial operations. And it has been told that the Swarnamakshika is best among all Rasayanas i.e. Rasayanagryaha. By this it is evident that Swarnamakshika is very much useful in both Lohavada and Dehavada. This might be the reason that the earliest Rasacharyas were included the Swarnamakshika under Maharasavarga. As the Swarnamakshika is the source of two main dhatus Viz copper and iron, by the influence of modern chemistry the recent Rasacharyas might have grouped it under Upadhatuvarga. The present study aims at a comprehensive literary review of Swarnamakshika about their shodhana, marana, amritikarana, and their therapeutic uses in different disease conditions.

Keywords: Swarnamakshika, Sodhana, Marana etc.

Introduction

Rasoushadhies are unique by themselves as the various samskaras advocated to them will convert them to bio available form and increase the potency of drug, making them to act quicker even in low dose. Acharyas have classified the drugs on the basis of their affinity towards Parada. But there are various Rasadravyas which have common major element in them. Based on the same Rasaamritakara Sri Yadavjitrikamji Acharya has classified Rasadravya on the basis of Major element as Iron containing Minerals, Calcium containing Minerals, Copper containing Minerals. This new dimension is well accepted by present Rasashastra community, yet its significance is not established by any research works. Copper containing group is one group of Rasadravyas which includes minerals like Swarnamakshika, Sasyaka, Tamra, and animal origin drugs like Bhunagasatva. After the development of Rasashastra metals like Swarna (Gold), Rajata (Silver), Tamra (Copper), Loha (Iron) etc. were found therapeutically useful after processing them by various pharmaceutical processes such as Sodhana, Marana, Amritikarana etc. Rasaoushadhies gained importance because of their smaller doses and quick relief as compared to herbal drugs in various ailments.

Swarnamakshika is one of the Maharasa groups of drugs

according to Rasa Ratna Samuchaya. The importance of Swarnamakshika is well explained in Rasa Rathna Samuchaya, that it is said as Prana of Parada (Mercury), it is a Rasayana (rejuvenator), a best Vrishya (aphrodisiac) and it cures all the diseases.

Materials & Methods

Review of Ayurvedic literature of different era like Charak Samhita (2500 BC/1000 BC), Sushrut Samhita (500 BC), Ashtanga Hridaya (400 AD), Sarangadhar Samhita (1300 AD), Cakradutta (1100 AD), Bhabprakash (1600 AD) and rasa granthas like Rasa Ratna Samuchaya Kaara (13th century), Rasatarangini (20th century), Rasajalanidhi Kaara (20th century), etc. have been done vividly to collect data. The information regarding the properties, action, therapeutic uses, Sodhana, Marana, Amritikarana etc. have been furnished in very methodically.

Historical Background of Swarnamakshika

There are no references regarding a mentioning of Swarnamakshika in Vedic period. It was only in samhita era the use of Swarnamakshika was started as medicine. Plenty of references are available in all almost all the Samhitas. Literatures of samhita period are mainly augmented with the

therapeutic importance of makshika, inclusion of makshika in different groups, source of origin, different synonyms, and different types are found described in detail. But regarding pharmaceutical processing very little description is found in disperse manner.

In Brihat Thrayis

The medicinal importance of Swarnamakshika was first explained in Charaka samhita in the treatment of two main diseases viz Kushta and Pandu. In Kushta chikitsa it is recommended to use with gomuthra as anupana and also Parada which is treated by Swarnamakshika^[1], In Paanduroga chikitsa Swarna makshikadi yoga is recommended, which contains mainly Swarnamakshika along with other minerals and herbs^[2]. Swarnamakshika is also mentioned Susrutha samhita in the context of Madhumeha chikitsa^[3]. It is also advised in jara, kusta, pandu and kshaya. Astanga sangraha considered Swarnamakshika as one of the best "Rasayana dravya" and different kalpas of Swarnamakshika having Rasayana qualities were mentioned. Mythological origin, occurrence, synonyms and different varieties and the therapeutic qualities of Swarnamakshika are mentioned in detail^[4].

In Laghu Thrayis & Nighantus

Acharaya Sharngadhara described shodhana and marana in details^[5]. Bhavamisra described as Upadhatu of Gold. Two types are described i.e. Swarna Makshika having Golden luster 2. Raupya, Makshika having Silvery luster. It is having properties like Vrishya, Rasayana, Chakshushya and used in Vasti Ruja, Pandu, Visha, Meha, Arsha and Kandū.^[6] And also, the descriptions of types, Pharmacological properties and indications in diseases like Bhrama, Hrillasa, and Murcha were found in nighantus^[7].

In Rasa Granthas

During the Rasashastra period, the shodhana and satvapaatana of the Swarnamakshika is described in detail and it is explained that Swarnamakshika is best drug for the incineration of Rajatha^[8, 9] and also it is explained that it is very much useful in paradakarmas due to its special qualities like Rasendra prana, Durmelalohadwayamelana^[10] etc. The mythological origin of Swarnamakshika and description of shodhana, satvapaatana are elaborately available^[11] Rasa Ratna Samuchaya Kaara (13th century) gave detailed description of Swarnamakshika regarding its qualities, shodhana, maarana and satvapaatana procedures etc., He has grouped it under Maharasa varga^[12]. Acharya Madhava (17th century) described Swarnamakshika in Upadhaatu varga. He has explained types, synonyms, occurrence, therapeutic qualities, and shodhana and maarana procedures in detail^[13]. The author of Rasatarangini (20th century) Sri Sadananda Sharma explains Swarnamakshika in Upadhaatu varga and gives a detailed description about its occurrence, types, therapeutic qualities, Shodhana, Maaranadi procedures^[14]. The Rasajalanidhi Kaara (20th century) compiled almost all the literature pertaining to Swarnamakshika from the available previous texts^[15].

Synonyms of Swarnamakshika

Synonyms have a special importance and significance in identifying and understanding of a drug. Synonyms facilitate the easy identity of the drug. Sometimes they indicate morphological structure, habitat, pharmacological properties

and therapeutic action and uses of the drug. Following are the some of the important Synonyms of Swarnamakshika compiled from different texts^[16-20]: Swarnamakshika, Taapya, Maksheeka, Tapeeja, Avarta, Taapija, Bruhadvarna, Tapyadhaatu Suvarnamakshika, Hemamakshika, Dhaatumakshika, Makshikadhaatu, Madhudhaatu "Taapidesh Samudbhava, Madhumakshika, Garuda, Tapta, Taapyaka, Kanchana Rasa etc.

Mythological Origin

Swarnamakshika is said to have its origin from the drops of blood felled from the wound in the injured sole of lord Krishna. The wound in the sole was caused by an arrow arched by a hunter by confusion with the animal, when he was in yoganidra in the forest, after completing his duty in Mahabharata^[21-22]. The Kanchana Rasa i.e. Swarnamakshika is said to be brought by lord Vishnu from the suvarna shaila i.e. Sumeru Mountains and kept on the banks of river. Taapi and kirata, cheena, yavanadesha, which shines brightly in madhava masa due to intense sunrays^[23].

Types of Swarnamakshika

Swarnamakshika is of 2 types^[24]

- Kanyakubjodbhava Swarnamakshika
- Tapatiteeraja Swarnamakshika

Swarnamakshika is of 3 Types^[25]

- Kadamba
- Kaaravellakhya.
- Tanduleeyak

Grahya Swarnamakshika Laskhanas^[26-27]

- Should have Swarna varna
- Should be soft externally.
- Should have heaviness.
- Should have bluish and blackish shine.
- When it is rubbed on stone, some gold color lines must be visible on the stone.
- Should not have angles.
- On rubbing over hand black color has to appear on hand.

Agrahya or Heya Swarnamakshika Lakshanas^[28]

- Rough on touch
- Less weight
- Having angles
- Similar to khara loha

Dhaatuvadatmaka Gunas of Swarnamakshika^[29]

- Rasendra prana - Life of mercury i.e. inevitable in various mercurial operations.
- Durmelalohadwayamelanakara - Can bring together the dhaatus (metals) having antagonistic properties.

Shodhana of Swarnamakshika

Drugs and their kalpas mentioned for shodhana of Swarnamakshika in different Rasa classics for shodhana by various methods. Punarnava Eranda taila Aranala Matulunga swarasa Shigrumoola Kadalikanda swarasa Suranakanda Triphala kwatha Tankana Nimbu swarasa Trikatu Saindhava lavana Kodravadrava Kalamarisha kwatha Shalikwatha Amlavetasa Rasa Karkotikanda swarasa Agastya Pushpa Niryaasa Ghruta Meghanada Naramutra Pashanabheda Jayantipatra swarasa Kulattha kwatha etc. use in shodana.

Table 1: Showing various shodhana procedures of Swarnamakshika

Method	Procedure	Classics
Swedana	Swarnamakshika gets purified by boiling it in Eranda taila and Matulunga swarasa for two ghatikas (1 hour and 36 minutes) ^[30] .	RRS
Swedana	By boiling in kadalikanda swarasa for two ghatikas in dola yantra, Swarnamakshika gets purified ^[31-35] .	RRS YR R. Chu RT RJN
Nirvapa	Swarnamakshika is purified by heating in intense fire and immersing in triphala kwatha ^[36-38] .	RRS R.Chu
Bharajana	Swarnamakshika should be powdered in Khalva and filtered. This filtered powder should be taken in an iron vessel, Nimbu swarasa added to it and heated. It should be stirred all the while with the help of spoon, until the Swarnamakshika gets the lohita varna (red color). Then again Nimbu swarasa added and the same procedure repeated. In this way Swarnamakshika should be heated for two or three days. By this Swarnamakshika gets purified.	RT
Bharajana	Three parts of Swarnamakshika and one part of Saindhava lavana should be taken in an iron vessel and Matulunga swarna or Jambeera swarasa should be added to it in sufficient quantity and heat it until the bottom of iron vessel becomes red hot and by this time Swarnamakshika become purified. ^[40-45]	AP BYT YR Shr. Sam RV RJN
Swedana + Puta	Swarnamakshika should be kept inside the Suranakanda and it should be subjected to swedana using liquids like taila, kanji, takra, gomutra, kadalirasa, kulattha kwatha and kodrava kwatha (one time in each liquid). Then it should be heated with shaara, amla, lavana, Eranda taila and ghruta. Chakrikas are made and subjected to puta for three times, Swarnamakshika gets purified. ^[46-47]	RJN RA
Swedana+Putra	Swarnamakshika should be kept inside the Suranakanda and subjected to swedana in dolayantra containing kadalikanda swarasa, then it should be treated with Eranda taila and subjected to puta. By this Swarnamakshika becomes purified. ^[48]	R A
Swedana	Swarnamakshika becomes purified by boiling it in dolayantra containing Kadali Kanda Swarasa and karkotikanda swarasa ^[49] .	RP
Swedana	By boiling in dolayantra containing kalamarisha kashaya for one day Swarnamakshika gets purified. ^[50]	RT
Swedana	Swarnamakshika becomes purified by boiling in dolayantra containing kalamarisha kwatha and shali kwatha ^[51-52] .	RV RJN

According to the author of Rasa darpana the drugs used for swedana procedures can also be used for the purpose of bharjana, by which Swarnamakshika becomes purified i.e., by doing bharjana with Eranda taila, Matulunga swarasa and kadali kanda swarasa also Swarnamakshika becomes purified.

- RRS- Rasa Ratna Samucchaya
- YR- Yoga Ratnakara
- R. Chu- Rasendra Chudamani
- RT- Rasa Tarangini
- RJN –Rasa Jala Nidhi
- RP- Rasa Padatti
- RV- Rasa Vidyotini
- AP- Ayurveda Prakasha
- BYT- Bruhad Yogatarangini
- Shr. Sam- Sharangadhara Samhita
- RA- Rasarnava

Saamanyashodhana of Upadhaatus

By giving Bhavana of Trikatu arka and Triphala arka for

twelve times all upadhaatus get purified.

Marana of Swarnamakshika

Drugs mentioned for marana of Swarnamakshika in different Rasa classics.

- Gandhaka
- Nimbu swarasa
- Hingula
- Tila taila
- Ghruta
- Eranda taila
- Ajamutra
- Kulattha kwatha
- Takra
- Matulunga swarasa
- Kumari
- Beejapura swarasa

Table 2: Showing different marana procedures of Swarnamakshika

Varaha Puta Number of puta-5	Shuddha Swarnamakshika and equal quantity of Gandhaka RR S are mixed together and ground well in Matulunga swarasa then it is dried and kept in sharava samputa and subjected to five varaha putas to obtain the bhasma of Swarnamakshika ^[53-55] .	RRS RJN R. Chu R. Cha
Kurma Puta Number of puta-3	Shuddha Swarnamakshika and equal quantity of Gandhaka are mixed together and ground well in Matulunga swarasa then it is dried and kept in sharava samputa and subjected to three kurma putas to obtain the bhasma of swarnamakshika ^[56] .	R.P
Putra	Shuddha Swarnamakshika is ground well with Hamsapadi swarasa, Devadali swarasa, vata praroha swarasa, and arkadugdha each for three times, chakrikas are prepared kept in Sharava samputa and puta is given in Bhudhara yantra ^[57] .	BRRS
Kupipakwa & Gaja Puta Number of puta-3	Shuddha swarnamakshika is mixed with equal quantities of Parada and Gandhaka and kajjali is prepared. This kajjali is ground well with Nimbu Swarasa kept in Kupa or Damaru yantra and subjected to paka. The talastha Bhasma obtained is collected and bhavana is done with Nimbu swarasa for three times and subjected to three Gajaputas ^[58] .	RS
Gaja Puta Number of puta-7	Shuddha Swarnamakshika is ground with Nimbu swarasa and subjected to seven Gajaputas to obtain bhasma. ^[59]	RS

- BRRS- Brihat Rasarajasundara
- RS- Rasayana Sara
- R.Cha- Rasa Chandamshu

Amritikarana of Swarnamakshika Bhasma

There is no direct reference is available for Swarnamakshika bhasma Amritikarana in the classics. As Swarnamakshika contains Tamra as one of the major elemental constituent, The Amritikarana methods expained for Tamra Bhasma can be implemented in general.

Following methods are usually adopted ^[60]

- a) Swarnamakshika Bhasma with equal quantity of panchamrita is taken in a Loha patra and this mixture is covered with Sharava and subjected to paka, till it becomes Nirdhuma. After Swangasheeta this mixture is collected and subjected to bhavana with Triphala kwatha, Chakrikas are prepared and subjected to five varaha putas ^[61].
- b) Tamra Bhasma and 1/2 part of shuddha Gandhaka are mixed together and ground well with panchamrita, Chakrikas are prepared and kept in Sharava samputa and subjected to three Gajaputas ^[62].
- c) Tamra Bhasma and 1/2 part of shuddha Gandhaka are mixed together and ground well with Nimbu swarasa for three hours and bolus is prepared and dried well. This bolus is kept inside the Surana Kanda and wrapped with Mrit lepita Vastra and dried well and subjected to Gajaputa.
- d) Tamra Bhasma is ground well with Kumari Swarasa and dried in sunlight. This dry powder is kept in sharava Samputaa and subjected to Varaha puta for seven times.

Pharmacological Properties ^[63-68]

Rasa: Madhura, Tikhta, Kinchit kashaya Rasa.

Guna: Laghu, Sheetta.

Veerya: Sheetta

Vipaka: Katu

Dosha Prabhava: Tridoshaghna, Visheshataha kapha pitta hara.

Karmas

- Vrushya
- Rasayana
- Chakshushya

- Vishadoshahara
- Swarya
- Balya
- Pranavardhak
- Sakalamayaghna
- Dehavardhak
- Medhy

Therapeutic Uses ^[69-70]

- Jeerna jwarahara
- Arshahara
- Kantharogahara
- Mehahara
- Kamalahara
- Bastivedanahara
- Apasmarahara
- Kanduhara
- Mandagnihara
- Grahanihara
- Arochakahara
- Paanduhara
- Anidraahara
- Shwayathuhara
- Hrudrogahara
- Kushtahara
- Shoshahara
- Kshayahara

Amayika Prayoga ^[71-73]

Yakshma: with Shilajatu

Mutrakrichha: with Yavakshara

Shotha: with Punarnva, Amrita, Shunti, Darvi kwatha

Masurika: with Kanchanara twak kashaya

Vishama jwara: with Ativisha

Kasa: with Pippali and Madhu

Raktapitta: with kajjali, Madhu

Garbha jwara: with Rasasindura, Abhraka and Vyosha

Bala veerya vriddhi: with Rasasindura and Honey

Raktasrava: with Pinda kharjura

Bhagandar: with Arsha, Jwara

Pandu: with Vidanga, Trikatu, Triphala, Ghrita

Jwaratisara and Shul: with Ativisha, Bilva, Bala, Shunti

Dose of Swarnamakshika Bhasma

½ ratti to 2 ratti.

Important Yoga Which Contains Swarnamakshika Bhasma

- Kalpadruma Rasa
- Panchamrita Parpati
- Garbha Chintamani Rasa
- Panchamrita Rasa
- Grahani kapata Rasa
- Bhaktavipaka Vati
- Chaturmukha Rasa
- Chandraprabha Vati
- Jayamangala Rasa
- Maharajanrupativallabha Rasa
- Mihirodaya Rasa
- Raktapittantaka Rasa

Ashuddha Swarnamakshika Janita Doshas

- Mandagni
- Vishthambha
- Kushta
- Balahani
- Netravikaras
- Gandamala
- Halimaka
- Koshtanilaprakopa

Discussion

Swarnamakshika is used in the treatment of various diseases since time of Samhita Kala. Knowledge regarding Tamradhatu, which is a form of copper, was present even during the Vedic period. There are no references regarding a mentioning of Swarnamakshika in Vedic period. Koutilya Arthashastra also says about pingala coloured tamra dhatu. By these we can infer that people had knowledge of Swarnamakshika 3000 years back. Different authors have expressed varying opinions on how to classify Swarnamakshika, categorizing it under Maharasa, Uparasa, Rasa, and Upadhatu. This might be due to their differing experiences with the process of parada, in almost all the texts it is recommended that saindhava lavana (rock salt) be added to Swarnamakshika during the process of sodhana (purification). However, in practice, Swarnamakshika is purified using nimbu swarasa (lemon juice) alone, without the addition of saindhava lavana. According to the texts, during the process of marana, 1/4th part of suddha gandhaka (purified sulfur) is recommended to be mixed with Swarnamakshika. In actual practice, it is not used, as the purified compound itself contains some part of sulphur which is sufficient for its marana. It is advised to use Gajaput for the preparation of Swarna Makshika Bhasma. However, the heat generated by Gajaputa is excessive, causing the chakrikas to become very hard. If the processes of sodhana or marana are not properly carried out, it may lead to several complications such as kushta (skin diseases), aandhya (loss of vision), vanti (vomiting), and even marana (death). The treatment for these conditions is mentioned as kulatha kwatha or dadima kwatha.

Conclusion

Swarnamakshika is a very important drug in ayurveda.

However, Vimala is commonly used in its place today, as genuine Swarnamakshika is not often found. The key difference between Vimala and Swarna Makshika lies in their physical characteristics. Vimala has angles, edges, and facets, giving it a cubic shape, while Swarnamakshika lacks these features and does not have a defined shape. According to modern metallurgy, Chalcopyrite looks like and is easily confused with iron pyrite. It is referred to as fool's gold because of its golden colour.

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