A LITERARY REVIEW ON ANTIPOISONOUS PROPERTIES OF SWARNAMAKSHIKA BHASMA

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ABSTRACT
Swarnamakshika Bhasma is rasayana-agrya[prime rejuvenator] & sarva-roghara [destroyer if all diseases] maharasa dravya having properties opposite to that of visha[poison] & is directly told to be vishahara [antipoisonous] and rasayana[rejuvenator] in different rasashastra texts, which makes it a potent drug of choice in treatment of poisoning. It is a bhasma, that means it has size of nanoparticles which makes it vyavayi & vikasi in karma & hence facilitating target drug delivery & instant action which is a property most important for treatment of visha. Here, an attempt has been made to analyze data from different ayurvedic texts & draw some fruitful conclusions relating successful use of swarnamakshika bhasma in Agadtantra/Vishachikitsa.

KEYWORDS: Swarnamakshika bhasma, Agadtantra, Vishachikitsa, Antipoisonous.

INTRODUCTION
Swarna makshika is a maharasa dravya, chemically Chalcopyrite CuFeS₂ & is widely used in treatment of pandu, prameha, udara etc. It is said to be updhatu of swarna as it contains some trace amounts of gold in it. It has been studied for different diseases, properties in kayachikitsa & rasashastra fields.

But among its properties it is also said to be antipoisonous & rasayana. Almost no study has been done to explore its properties from agadtantra point of view and hence a literary review
of its properties from different rasashastra texts is being done here to understand its scope and potential use in visha chikitsa.

[hereby, poison will be referred to as visha & antipoisonous will be referred to as vishaghna/vishahara ]

AIM

To study swarnamakshika bhasma in the light of vishachikitsa

OBJECTIVES

To study swarnamakshika bhasma from different ayurvedic texts.

To draw conclusions based on critical analysis of literature regarding use of swarnamakshika bhasma in vishachikitsa.

MATERIALS AND METHODS

This is conceptual type of study. All sorts of references related to Swarnamakshika Bhasma has been collected and compiled from various available classical texts of Ayurveda like bhruhattrayi, rasa granthas and yogaratnakara with available commentaries. Literature available from journals, online media and books is also collected. All matter is analyzed and attempt has been made to draw some conclusions relating successful use of swarnamakshika bhasma in Agadtantra/Vishachikitsa.

Literary review

Makshika Bheda (Types): Makshika is of three types. Swarna Makshika (Copper Pyrite) and Rajata Makshika (White Pyrite) Kamsya Makshika (Black Pyrite). Swarna Makshika (Copper Pyrite) – bearing golden tints was found in Kanyakubja. Roupya Makshika (White Pyrite) – which resembles Panchvarna Suvarna, contains much of the stone was found in the banks of river Tapti.[1]

Occurrence Of Makshika (Prapthi Sthana): Classically, it is found on the banks of Taapi river and Kirata, Cheena, Yavana Desha and also Kanyakubja Pradesha. The mineral sources of Makshika (Copper Pyrite) are found mainly in Bihar, Rajasthan, Tamilnadu, Karnataka, Madhya Pradesh, Sikkim in India, and also found in America, Russia, Nepal, Burma, China, Spain, Portugal, Italy, Norway and Cyprus.

Makshika Shodhana (Purification): Makshika Becomes purified by boiling it in dolayantra containing Kadalikanda Swarasa and Karkotikanda Swarasa.[2]
Makshika Marana (Incineration): Shuddha Makshika and equal quantity of gandhaka are mixed together and ground well in Matulunga Swarasa, (Citrus Medica) then it is dried and kept in crucible or sharava samputa and subjected to three kurma putas 3200 -3500 c to obtain the bhasma of makshika.\(^3\)

Amritikarana of Makshika: By subjecting to puta, bhasma becomes teekshna, ushna, ruksha, etc. to nullify these and to produce snigdha, soumya, and sheeta guna in the bhasma, amritikarana process is done. In most of the rasa texts amritikarana to makshika (copper pyrite) bhasma is not mentioned. The bhasma containing the tamra (copper) some time shows the untoward effect. Therefore, it is necessary to conduct amritikarana by using panchamrita (dugda, dadhi, ghrita, madhu, sharkara). It also removes the remaining doshas from the bhasmas.\(^4\)

Guna & Karma of Swarna Makshika Bhasma from different rasa granthas can be summarised as

<table>
<thead>
<tr>
<th>#</th>
<th>Grantha</th>
<th>Rasa</th>
<th>Guna</th>
<th>Karma+ rogaghnata</th>
<th>Virya</th>
<th>Vipaka</th>
<th>Doshaghnta</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rasarnava(^5)</td>
<td>Madhura tikta</td>
<td>-</td>
<td>Meha, arsha, kshaya, kushta, balya, yogavahi, rasayana, jwara</td>
<td>-</td>
<td>-</td>
<td>Kapha-pitta</td>
</tr>
<tr>
<td>2</td>
<td>Rasa ratna samuccaya(^6)</td>
<td>Madhura Kashay</td>
<td>Laghu</td>
<td>Jara, vyadhi, visha nashaka, Sakalamayghna</td>
<td>Sheeta</td>
<td>Katu</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>Rasendra sara sangrah(^7)</td>
<td>Tikta madhura</td>
<td>-</td>
<td>Kshaya, meha, arsa, krimi, Kushta, rasayana, yogavahi</td>
<td>-</td>
<td>-</td>
<td>Kapha pitta</td>
</tr>
<tr>
<td>4</td>
<td>Ananda kandah(^8)</td>
<td>Kashaya tikta, madhura, katu</td>
<td>Laghu</td>
<td>Kushta, shoola, hikka, vrana</td>
<td>Ushna</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>Rasa Tarangini(^9)</td>
<td>Madhur, tikta</td>
<td>Snigdha Guru</td>
<td>Vrishya, chaksushya, rasayana</td>
<td>-</td>
<td>-</td>
<td>Tridosha</td>
</tr>
<tr>
<td>6</td>
<td>Ayurveda prakash(^10)</td>
<td>Madhur, tikta</td>
<td>Snigdha Guru</td>
<td>Bastirog, kantharoga, shopha, Pandu, meha, vishodara, Arsha, visha, kandu, Vrushya, rasayana, chaksushya</td>
<td>-</td>
<td>-</td>
<td>Tridosha</td>
</tr>
</tbody>
</table>
From above table it can be pointed out that swarnamakshika bhasma is having properties opposite to that of visha & is directly told to be vishahara and rasayana which makes it a potent drug of choice in treatment of poisoning.

As described in Yogaratnakar Grantha swarna bhasma and swarna makshika bhasma should be used in visha badha & that its lehan can cure different types of vishas, even in combination of vishas.¹⁴

शर्कराचूर्क सयुक्तं चूर्ं ताप्यसुवर्ोयोः। I

लेहः प्रशम्यतिउऽर्म नानायोगकृतंविशं II

यो. र. ४५ कृतिविशा ॥

It is also described in Ayurveda Prakash that it is an updhatu of swarna & hence can be used as a substitute of swarna [swarna is told to be used in visha chikitsa in almost all ayurvedic texts]¹⁵

उपधातु सुवर्णस्य किन्चित्त्वर्णमुणः समम् II

आ. प्र. ४/२

तथापि काचनाभावे दीयते स्वर्णमाक्षिकं II

आ. प्र. ४/४
In rasa ratna samuccaya it is told that by consumption of swarnamakshika bhasma aging, diseases & poisons do not affect the body.\textsuperscript{[16]}

तत्सेवनात जराव्याधिविषेष्यथिरिभुयते II

र. र. स. 2/79

Properties of Visha (poison) by Acharya Charak\textsuperscript{[17]}

लघुक्षमाशु विशादं व्यवायि तीक्ष्णं विकासी सूक्ष्मम च।
उण्मनिर्द्धारसं दशगुर्मुक्तं विषं........II

च. चि. 23/24

From above description of suvarnamakshika it is evident that it can be used as a vishgna dravya against poisons according to its description in various ayurvedic texts, its properties (which are opposite to that of visha) as well from its rogagnata directly.

DISCUSSION

It has been proved that smaller particle size of bhasma enables rapid dissolution in the body fluids and quick digestion of the bhasma. Nano-particle size of the bhasma facilitates self-targeted activity. This proves vyavayi, vikasi guna of bhasma. Nanoparticle improve drug delivery, the drug will be taken by cells more efficiently than the larger one. It also gets cleared from the body easily.\textsuperscript{[18]} And for antipoisonous activity this vyavayi- vikasi guna of swarnamakshika bhasma is required, as it can reach the organs with the same speed as that of poisonous substance & hence can treat fast.

Swarnamakshika bhasma is proved to be antioxidant in nature & hence can prevent end organs from harmful effects of any kind of poison/toxic damage.\textsuperscript{[19]}

From above description & different references it is evident that swarnamakshika bhasma has all the properties that are opposite to that of poisons. Also it is told that swarnamakshika bhasma can be used as substitute of swarna bhasma, which is directly told to be used in treatment in poisoning.

Hence there is a good scope for study of its antipoisonous properties by researching it on different types of poisons invivo/invitro. For e.g. as described above in Ayurveda the
properties of visha & that of madya[alcohol] are same\textsuperscript{20}, so we can test its antipoisonous properties by testing it in acute as well as chronic type of alcohol poisoning.

CONCLUSION
Swarnamakshika is maharasa dravya considered to be rasayana-agrya and sarva-rogahara. Properly shodhita and marita swarnamakshika bhasma does broad spectrum action due to its nanoparticle form & antioxidant properties. From the above collected data of its different properties from ayurvedic texts it has been proved that it can be used as a potent antipoisonous drug. As it is tridoshahara, it can be prescribed in almost all vyadhi even in durbala, komala, garbhini & children with proper anupana and dose. As less clinical data is available regarding antipoisonous properties of Swarnamakshika bhasma, to authenticate its antipoisonous karma, preclinical as well as clinical trials in different amayika pragoya is needed. It is directly told to be vishahara and rasayana which makes it a potent drug of choice in poisoning as well as in treating after effects of poisoning to create dhatu saamya in body.

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