‘SUPERIORITY OF MERCURY AS MEDIUM FOR THE PREPARATION OF BHASMA IN METALS- DISCUSSED IN PAPER WITH SUITABLE SCIENTIFIC EVIDENCE’

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INTRODUCTION

Rasa shastra mainly deals with the processing of metals and minerals to make them suitable for therapeutic purposes. Pharmaceutical process plays a very important role in the preparation of any medicine as far as the Bhasma is concerned. Bhasma is a calcined preparation in which metal or minerals or gems is converted in ash form, and bhasmikarana is a process by which substance which is otherwise bioincompatible is made biocompatible by certain sanskaras or processes. It converts metal from its zerovalent state to a form with higher oxidation state and eliminates the toxic nature of metal and its oxide while rendering the metal oxide with high medicinal value. The main aim of Rasashastra is to use Parada in different forms to get therapeutic effect, for rasayana purpose, for dehavada and for lohavada, to achieve Moksha (salvation) etc. These various references indicate that prime importance has been given to the use of parada in the preparation of dhatu bhasma. According to various Rasa granthas the quality will be decided on the basis of medium which is used during the preparation of dhatu bhasma and is considered to be the superior.

MEDIA USED FOR MARANA

“Lohanam maranam shreshtam sarvesham rasabhasmanam Mulibhir madhyamam prahuh kanishtam gandhakadibhi: Arilohena lohasya maranam durgunapradam” (R.R.S 5/13)

<table>
<thead>
<tr>
<th>MEDIUM</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rasa Bhasma</td>
<td>Superior</td>
</tr>
<tr>
<td>Herbal</td>
<td>Middle Standard bhasma</td>
</tr>
<tr>
<td>Gandhakadi minerals</td>
<td>Lower category</td>
</tr>
<tr>
<td>Arilohas</td>
<td>Bad quality bhasma</td>
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</tbody>
</table>
WHY MERCURY IS SUPERIOR AS MEDIUM?

1) Rasa marita bhasma

Parada acts as a reducing agents and forms an amalgam with the metals imparting special therapeutic attributes to the dhatu bhasma. Parada acts as a catalyst and helps in the formation of bhasma easily imparting its properties like yogavahitwa (synergistic action), laghutwa (lightness) and Rasayana (rejuvenator) to the bhasma. According to ‘Parada Samhita’ “loham sutayuktam dosham styajetsutastu loha yuka | Ata: suvarnadi lohanvi vina sutam na maraye ||”

It says dhatu marana should not be done without parada if done so then it is going to do vedha1 (damage to the cells). Similarly it is also quoted that if a bhasma prepared without using parada is administered in a person then it is going to get deposited in the stomach cells as kitta1 (waste product). Disintegration of the metals and minerals into finer particles and there even the traces of mercury will not be present in the final product. Less number of putas with relatively less duration will be required.

When Parada is used for marana there are two benefits

1) Metals leaves their doshas after combining with Parada.
2) With that Parada with combination with metals it also tends to leave its doshas.

2) Herbal drugs marita dhatu bhasma

Alkaline and acidic content of herbal drugs helps in the disintegration of atoms but in this case the bhasma is liable to contain the residue of herbs after being subjected to puta. Organic materials of the herbs is burnt leaving traces of inorganic material. which is mixed with the bhasma. Thus it may contain some amount of impurity besides the organic materials (Dr Damodar Joshi et.al). Though % of such of the material is very low it contains the same but the residue alkali is considered dhatukarshaka and pumsatvajanaka.

2) Gandhakadi drugs marita dhatu bhasma
Though there is chance of evaporation of sulfur etc some portion may remain and likely to change the property of the finished product. Hence the bhasma are given least therapeutic important.

3) Ariloha marita dhatu bhasma

Ariloha means the loha which is the enemy of other loha. The metals which kills the metallic properties of any other metal is considered to be ariloha. By using ariloha we can easily convert the metals to its bhasma state but if it is used for therapeutic purpose it imposes harmful effect on the body.

RASAMARITA BHASMA- ITS ATTRIBUTES AS RASAYANA AND IN JARA

“Rasabhavanti lohani mrutani suravandite | Vinighnanti Jaravyadhin rasayuktani kim puna: || (A.P.3/43)

Rasabhavanti - Asatvaguna is converted to Rasa samana guna This Rasayanaguna yukta ( immunomodulation and antiageing qualities).when consumed it spreads quickly and fast acting ( shigravyapi) and becomes Rasamaya i.e. it mixes in Rasa-Rakta ( circulations) and hence readily absorbable , adaptable , assimilable and non-toxic.

Jara vyadhi vinighnanti- when lohas are processed with Parada ( Rasa) then it gets antiageing property and removes diseases. It is also yohavahi ( target drug delivery ), alpamatra ( prescribed in minute doses), agnideepaka ( increases metabolism at cellular level and acts as catalyst).

These attributes of bhasma are comparable with the action of Nanoparticles in the body. These are biodegradable, biocompatible and non antigenic in nature.Nano particles can be used to provide selected /targeted/ controlled delivery of drugs to specific site of action even across the blood brain barrier. Nano medicine is a regenerative medicine for treatment or repair of tissues and organs , within the targeted cells.

EVIDENCES

1) “Preparation of Parada marita yashad bhasma and hartala marita yashad bhasma with their comparative analytic study.” (Ref: Research Article International Journal of Research in.IJRAP. JUL-AUG 2013.)

1 Ingole Rajesh.KShamsunde, 2Patange Ravish Shamsunder ,3 Dhanurkar Santosh Ramchandra,

4 Bakare Sunil Chandrakant
Colour of Parada marita yashada bhasma was bright yellowish white and that of Hartala marita yashad bhasma was deep yellow. XRD of parada marita yashada bhasma showed major phase of zinc sulphide and minor phase of zinc oxide. While hartala marita yashada bhasma showed major phase of zinc oxide and minor phase of zinc sulphide. AFM of parada marita yashada bhasma showed even particles size and were found to be smaller than that of Hartala marit yashada bhasma. On pharmaceutical grounds and on the basis of quality of final product Parada marita yashada bhasma was found to better as compared with Hartala marita bhasma.


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Suvarna bhasma is an ayurvedic formulation manufactured using a textual method that involves repeated calcination and triturations. The mean size of these gold crystallites was less than 10 microns and the morphology was globular and irregular. The bhasma particles, which included a few nano sized particles, were observed to form agglomerates, which was caused by the calcination processes. EDAX, AAS, XRD, FT-IR and elemental assay findings confirmed that Suvarna bhasma contained gold as its single and major element being more than 98% pure gold. Bhasmas are known to be herbo-metallic complex moieties and such chemical characterizations will be helpful in understanding the pharmacological actions of Suvarna bhasma and will serve as a tool for re-defining the quality specifications. Thus the finding of this research will help in establishing well documented specifications for the quality of Suvarna bhasma as well as well documented protocols for substantiating that quality.
3) “Preparation and Analytical study of Rasa marit Tamra bhasma.” (Ref: ISSN:0976-5921/http://ijam.co.in)

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The following conclusion were made on the basis of observation and results obtained-Copper % was approximately 64% in Rasa marit Tamra bhasma. Kajjali can be a better media for the preparation of bhasma. Rasa marita Tamra bhasma requires less number of putas. Rasa marita Tamra bhasma can be prepared in relatively less duration.

DISCUSSION AND CONCLUSION

Many reference indicate the use of Parada bhasma in dhatu marana and it is considered as the best. The processing methodology itself imparts wonderful qualities to the dhatu bhasma which helps in effective management of different ailments. The qualities like Rasayana, anti ageing properties, yogavyahi, action like nano medicines (cellular level- DNA) etc are imparted to the body. The resultant of Rasa marit is more finer than other media, and the marana process requires relatively less time with less number of putas and the resultant bhasma will get disintegrated without traces of mercury into it. It has been said if bhasma is administered without using Parada then it will cause damage to the cells and it is going to get deposited in the stomach cells as waste product. For this purpose for good quality of bhasma and for excellent therapeutic effects Rasa marita bhasmas has to be administered and hence Rasa marit dhatu bhasmas are said be superior than other media of marit dhatu bhasmas. Scientific research findings indicate that Bhasma prepared by using Parada as a medium has finer particle size, easy to prepare, better bioavailable safe and therapeutically more effective.

REFERENCES


2) Dr. siddhinandana Mishra, Ayurvediya Rasashatra, Jai krishnas Ayurveda series, Chaukhambha orientalia Varanasi, p. 414, 415.
3) Dr. Indradeva Tripathi, Rasarnava Hindi tika, haridasa Sanskrit granthamala, chaukhamba Sanskrit series office Varanasi, slok 7-150, p. 109.

4) Dr. Indradev Tripathi, Rasaratna samucchaya, hindi tika, chaukhamba Sanskrit bhavana, slok 5/13, p-53.


8) Dr. Damodar Joshi, Rasa Sastra, Chaukambha Orientalia Varanasi.