

SIGNIFICANCE OF SHASTROKTA BHASMA PAREEKSHA IN PRESENT ERA**Saokar Reshma^{*1}, Pal Sourav^{**}, Ganti Basavaraj Y^{***} Kadibagil Vinay R^{****}**

^{*}Associate Professor, Department of Rasashastra and Bhaishajya Kalpana, SDMCA Hassan, India.

^{**}2nd Year PG Scholar, Department of Rasashastra and Bhaishajya Kalpana, SDMCA Hassan, India

^{***} Associate professor, Department of Rasashastra and Bhaishajya Kalpana, SDMCA Hassan, India

^{****}Professor & HOD, Department of Rasashastra and Bhaishajya Kalpana, SDMCA Hassan, India

ABSTRACT

Ayurveda, the Indian system is gaining worldwide importance as an alternative system of medicine. Bhasmas, which are the herbomineral preparations, constitute a major part of Ayurvedic medicines which are prepared using various metal and herbal materials. Though this Bhasmas are being used for centuries and are time tested, many a times they do not stand up in the national and international market due to the controversy regarding presence of free metals, toxicity problem etc and hence do not enjoy the similar status to their counterparts in allopathy and other system of medicine. The ancient classics of Ayurveda mentions different methods of bhasma preparation and also mention about different confirmatory tests i.e Bhasma pareeksha in detail. Though many sophisticated techniques for testing bhasmas have been evolved in recent years, this age old tests still holds true even today and can be performed at a very negligible cost by every physician during their daily practice. These different bhasmapareekshas such as Varitara, Rekhapurna, Apunarbhava, Niruttha etc not only reveal the physical nature of the bhasma but also tell about its chemical stability backed by scientific reasoning. Hence here an has been made to explain this bhasma pareeksha with a scientific reasoning thus making it feasible for all Ayurveda practioners to perform during daily practice thus reducing the untoward side effects and making people develop faith in Rasaushadhis especially Bhasmas.

Key words: Bhasma pareeksha, Rasaushadhi, Ayurveda

INTRODUCTION

Ayurveda, the Indian system is gaining worldwide importance as an alternative system of medicine. Bhasmas, which are the herbomineral preparations, constitute a ma-

major part of Ayurvedic medicines which are prepared using various metal and herbal materials. Though this bhasmas are being used for centuries and are time tested, many

a times they do not stand up in the national and international market due to the controversy regarding presence of free metals, toxicity problem etc and hence do not enjoy the similar status to their counterparts in allopathy and other system of medicine. The ancient classics of Ayurveda mentions different methods of bhasma preparation and also mention about different confirmatory tests i.e.Bhasmapareeksha in detail. Though many sophisticated techniques for testing bhasmas have been evolved in recent years, this age old tests still holds true even today and can be performed at a very negligible cost by every physician during their daily practice. These different bhasmapareekshas such as Varitara, Rekhapurna, Apunarbhava, Nirutthaetc not only reveal the physical nature of the bhasma but also tell about its chemical stability backed by scientific reasoning.

Marana or process of killing is derived from the original Sanskrit root *mru* which means to die; the casual form of the root becomes *marayati* which means to kill. The basic concept behind this is the metals and minerals are subjected to various processes so as to convert them in such a form that they won't be converted back to original form. This process not only helps in removing the harmful toxic effects but also help in converting the metals and minerals into light and fine state of subdivision so that they are easily absorbed and assimilated in the body and can be useful when given in small doses.

DEFINITION OF MARANA:

Shodhitan lohahatvadim vimardyaswarasadibhi | Agnisanyogato bhasmikaranam maranam smrutam ||

After undergoing the process of shodhana the metals and minerals are triturated with

swarasa etc liquids for a specific period of time and then subjected to different degrees of temperature called puta till the bhasma is obtained. This process is called marana.

STAGES OF MARANA:

Yatchurnitasya dhatvadedravaihi

sampeshyashoshanam |

Bhavanam tanmatam vidnyaihi bhavanachanigadyate || R T 2/49

Rasadi dravya paakanam pramanam

dnyapanam putam |

Neshto nyunadhika paka supakwam hitam

aushadham || R R S 10/47

- 1) Bhavana¹ (trituration with specific liquids for a given time)
- 2) Putapaka² (Heating at different temperatures through different putas)

Bhavana is the process where any liquid is added to the powder (shodhit metal/mineral with marana dravyas) and triturated till all the liquid dries up. It helps in making the particles finer, induces new properties to the main drug by the various liquids used and thus brings about the chemical changes required in the final product. Puta is the quantum of heat given to the drug for converting to bhasma. The heat given should be optimum, neither more or less. It help to bring about the physical and chemical changes in the bhasma by converting the hard, heavy, rough and bulky substance into soft, light, smooth and fine powder.




BHASMA PAREEKSHA³:





After giving the puta the bhasma should be triturated finely in the Khalwa yantra and sieved through a two folded cloth and then subjected to Bhasmapareeksha. The tests are as follows




a) *Varitara*




b) *Shlakshnata and mruduta*

- | | |
|------------------------------------|---------------------------|
| c) <i>Rekhapurna</i> | i) <i>Apunarbhava</i> |
| d) <i>Unnama/Uttama</i> | j) <i>Amlapareeksha</i> |
| e) <i>Nischandra</i> | k) <i>Varna pareeksha</i> |
| f) <i>Anjanasadrushasukshmatva</i> | l) <i>Gatarasatva</i> |
| g) <i>Nirdhoomatva</i> | m) Other specific tests |
| h) <i>Niruttha</i> | |

(a) Varitara	Picture
<p>In this the prepared bhasma is sprinkled over the surface of stagnant water. If the bhasma floats then it is said to properly prepared and if it sinks then it is incomplete. Usually a metal or mineral is heavier than water and sinks in water but when the same is converted into bhasma the gravitational force created by the weight of the particles is less that it is unable to break the surface tension of water and hence floats.</p>	
(b) Slakshnatwa	Picture
<p>The prepared bhasma is rubbed between the fingers then the bhasma should be smooth to touch. This indicates the fineness of the bhasma. If it is smooth then there are no big particles present</p>	
(c) Rekhapurnatva	Picture
<p>In this the prepared bhasma is rubbed between thumb and index finger. If it enters the furrows of the fingers than it is considered to be complete. It also tells about the shlakshnata and mruduta of the bhasma. While rubbing the bhasma it should be smooth and soft to touch. This test tells about the fineness of the bhasma. When the particle size of bhasma is between 1-2 microns or less than it is said to enter the furrows of the fingers.</p>	
(d) Uttama	

<p>When a grain of rice or dhanya is placed over varitarabhasma, the grain floats on the surface of bhasma then it is said to be properly prepared. The same interpretation can be given as for varitara. The weight of the grain is also not able to break the surface tension of water.</p>	
<p>(e) Nischandra</p>	<p>Picture</p>
<p>The bhasma is rubbed between thumb and index finger and held in bright light, if any shining particles are present than the bhasma is incomplete. Usually the metal or mineral has a specific shine and luster which makes it to shine in bright light but the same metal or mineral is converted into bhasma it loses its shine as it is converted into its salts which does not have any luster.</p>	
<p>(f) Anjanasadrushasukshmatva</p>	<p>Picture</p>
<p>The prepared is applied as anjana to the eyes, it should not cause any irritation to the eyes. This is especially told for Abhrakabhasma. The eyes being the most sensitive part any foreign body will cause irritation to the eyes, but in this case the particles are so fine like anjana that it is not able to cause any irritation to the conjunctiva.</p>	
<p>(g) Nirdhoomatva</p>	<p>Picture</p>
<p>In this the bhasma is heated in a dry test tube, it should not produce any smoke. This is specially done for gandhaka containing bhasmas. Gandhaka and other vegetative drugs used during the preparation turns to smoke when heated in test tube and gandhaka get deposited at the cooler sides of testtube thus confirming that the bhasma is not properly prepared.</p>	
<p>(h) Apunarbhava</p>	<p>Picture</p>

<p>Jaggery, Gunja, Tankana, Madhu and Gruta are taken in equal quantity and mixed thoroughly and it is then mixed with equal quantity of bhasma and heated in a musha. After cooling it is observed for the presence of shining metal particles in it. If free metal particles are present it shows that the bhasma is incomplete. The mitrapanchaka when heated turns to carbon and this carbon acts as a reducing agent thus bringing out the loosely bonded metal from the bhasma. The Tankana helps in reducing the melting point of metal and hence if the bhasma is not properly prepared or unstable, the shining particles are seen.</p>	
<p>(i) Niruttha</p>	<p>Picture</p>
<p>In this the bhasma is heated with equal weight of pure silver and the weight of silver is checked. If the weight of silver is unchanged then bhasma is complete. Silver has low melting and high chemical affinity for other metals due to which it attracts other metals towards it. If the bhasma is unstable then the free metal present in the bhasma will combine with silver thus increasing its weight.</p>	
<p>(j) Amla Pareeksha:</p>	<p>Picture</p>
<p>This is specially performed for Tamra and Tuthabhasma. In this the prepared bhasma is sprinkled on sour curd. If the colour of dadhi remains unchanged then bhasma is complete. If bhasma is not properly prepared then the free metal present in the bhasma will combine with acid in dadhi forming blue colour salts of copper and hence should be discarded.</p>	

		
(k) Varna pareeksha ⁴ :	Picture	
<p>The bhasmas have a specific colour and can be identified on the bases of its colour eg Abhraka bhasma is ishtika varna, Swarna bhasma is champaka varna, Tamra and Rajata bhasma is Krishna varna and so on. Any change in the normal colour of bhasma can be observed and identified.</p>		
(l) Gatarasatva	Picture	
<p>The prepared bhasma should not have any specific taste. It should also not cause any nausea or vomiting or tingling sensation as in case of varatika etc bhasmas.</p>		

(m) Specific tests:

Some specific tests are told for specific bhasmas like eg in Lohabhasma when put on cut surface of amalaki there should be any black discoloration which shows that the bhasma is complete. In case of Hartala

bhasma, 1 ratti (125 mg) of Hartala bhasma and lavanadrava are heated on tripod stand, if yellow colour powder settles down than it is positive for Hartala bhasma.

DISCUSSION:

Bhasma is a unique preparation in Ayurveda which is obtained after different process, like Shodhana, Bhavana and Marana. These sodhana processes helps to remove the impurities and reduce the particle size. The term marana literally means killing. Metal and minerals are heterogeneous to the body tissue, and therefore it is not possible to get assimilated into the cells of the tissues to exercise their prescribed therapeutic effect. It is therefore necessary to reduce these metal and minerals to a fine state of division. With changes in its mahabhautika composition it would be homologous with the mahabhutika composition of the cells on which the metals and minerals has to act to produce the therapeutic effect. This fine state of division of the metal and minerals are attained by exposing to heat i.e puta. After Bhasmikanana method the prepared bhasma is then subjected to bhasma pareeksha like Varitaratwa, Unnama, rekha purnatwa, niruttha, apunarbhava etc. the number of putas are decided after conducting these priliminary tests as they are easy and convinient to perform to ensure the genuinity of bhasma. These tests reveal the physical nature and chemical stability of the bhasma and are necessary to perform before administering the bhasma. After passing all type of bhasma pareeksha the bhasma can be used for therapeutic purpose.

CONCLUSION:

Various Bhasmapareekshas are told in ancient classics. These tests are very simple and cost effective and can be performed by any Ayurveda scholar. These tests not only reveal the physical nature of the bhasma but also confirm about the chemical stability. Though these tests are subjective, yet they

are very helpful to test the bhasma at primary level. With the advent of new sophisticated instruments for bhasma-pareeksha where establishing standards is still a question, these old tests still holds true. Ayurveda practioners should perform these tests during their daily practice thus reducing the untoward side effects and making people develop faith in Ra-saushadhis especially Bhasmas.

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CORRESPONDING AUTHOR

Dr. Saokar Reshma

Email id: sorubini7@gmail.com

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