

REVIEW PAPER ON GANDHAKA

Dr. Jyoti Sanouriya\*<sup>1</sup>, Dr. Sudeeksha<sup>2</sup>, Dr. C. P. Kashyap<sup>3</sup> and Dr. Sudarshan Kumar Thakur<sup>4</sup>

<sup>1</sup>MD Scholar, <sup>2</sup>MD Scholar, <sup>3</sup>Reader, <sup>4</sup>Lecturer

P.G. Department Of Ras Shastra and Bhaishjya Kalpana Rajiv Gandhi Govt. P.G. Ayurvedic College, Paprola, Distt. Kangra, Himachal Pradesh, India.

Article Received on  
28 August 2020,

Revised on 18 Sept. 2020,  
Accepted on 08 October 2020

DOI: 10.20959/wjpr202013-18864

\*Corresponding Author

Dr. Jyoti Sanouriya

MD Scholar P.G.

Department Of Ras Shastra

and Bhaishjya Kalpana

Rajiv Gandhi Govt. P.G.

Ayurvedic College, Paprola,

Distt. Kangra, Himachal

Pradesh, India.

ABSTRACT

*Gandhaka* is important amongst the *Uprasa* It is most important ingredient of many formulations of *Ras Shastra* and used in many ailments related to skin. *Parad* always processed with *Gandhaka*. It is essential agent for various processes of *Parad Samskaras Gandhaka* was extensively used in both *Dehavada* and *Lohabada*. *Dehavada means* in maintaining health and eradicating disease. *Lohabada* means converting lower metal into gold and silver. *Gandhaka* was supposed to be one of the most important substances, which was used along with *Parada* to form the basic material for scores of herbo-mineral combinations. It has very important place in *Rasa Shastra*. The colour of genuine *Gandhaka* should resemble that of the tail of parrot (greenish yellow). Smooth, Hard, Unctuous. It should be having the luster of *Kapikacchu Beeja* and *Navanita* (soft to touch).

For *Rasayanartha* and *Loha Vadartha*, it should be translucent like the fruits of *Amalaki* (*Amalasar Gandhaka*). *Shodhan* of *Gandhaka* is necessary because *Shilachurna* (Physical impurities like Clay, sand etc) *Visha Dosha* (Chemical impurities like Arsenic, lead etc). It is therefore to be purified carefully. Impure *Gandhaka* gives rise to *Kushta*, *Tapa*, *Bhrama*, *Pitta Roga* and destroys *Roopa*, *Veerya Bala*, *Sukha*.

**KEYWORDS:** *Gandhaka Shodhana Dose Swedan Pathya, Parada, Uprasa.*

INTRODUCTION

*Gandhaka* is grouped under *Uparasa*. Synonym of *Gandhaka* is “*Shulbari*” i.e *Tamra Shatru*. It is an essential agent for the various processes of *Parada Samskaras* such as

*Marana*, *Jarana*, and *Bandhana* etc. Mercurial preparations without *Gandhaka* are considered to be more toxic.

### Mythological origin<sup>[1]</sup>

- 1) It is the product obtained while churning *Ksheera Sagara* along with *Amrita*.
- 2) *Gandhaka* is considered to be *Raja* of *Parvati*.

When Goddess *Parvati* was amusing herself at *Sweta Dweepa* she menstruated. She took bath in *Ksheera Sagara* and washed her clothes which were soiled with menstrual fluid. By this odorous *Gandhaka* is said to be evolved.<sup>[2]</sup>

### History<sup>[3]</sup>

Sulphur is known to Indians long back, even since long time. In *Brahatrayi*, Sulphur is said to be used in several diseases as a therapeutic agent. Later, after 7<sup>th</sup> century A.D Sulphur was used extensively both in *Dehavidiya* (In maintaining the health and eradicating the diseases) and *Loha Vedha* (converting lower metals in to Gold and Silver). *Gandhaka* was supposed to be one of the most important substances, which was used along with *Parada* to form the basic material for scores of herbo-mineral combinations. It has very important place in *Rasa Shastra*.

### Vernacular name<sup>[4]</sup>

|                   |                   |         |                     |
|-------------------|-------------------|---------|---------------------|
| Hindi             | - <i>Gandhaka</i> | Bengali | - <i>Gandhaka</i> , |
| Marathi, Gujarati | - <i>Gandhaku</i> | Parsi   | - <i>Godrid</i>     |
| English           | - Sulphur.        | Kannada | - <i>Gandhaka</i> . |

### Synonyms<sup>[5]</sup>

|                      |                 |                    |                   |                    |
|----------------------|-----------------|--------------------|-------------------|--------------------|
| <i>Gandhapashana</i> | <i>Pamari</i>   | <i>Kruragandha</i> | <i>Navanita</i>   | <i>Saugandhika</i> |
| <i>Gandhi</i>        | <i>Bali</i>     | <i>Gandhaka</i>    | <i>Daityendra</i> | <i>Atigandha</i>   |
| <i>Sugandhika</i>    | <i>Balivasa</i> | <i>Gandha</i>      | <i>Daityendra</i> | <i>Kushtari</i>    |

### Availability<sup>[6]</sup>

Sulphur is available in its elemental form; especially near the volcanic mountains. There are “wells” of Sulphur in Sicily and United states. It is obtained almost pure; by hot and high pressure of water. It is also available in Spain, Japan, Russia, Chile, Finland, Italy etc. Sulphur is available in compound form also as a sulphate and sulphide.

### 1. Some of the sulphates are

|                  |   |   |
|------------------|---|---|
| Gypsum           | – | Calcium sulphate (CaSO <sub>4</sub> ·2H <sub>2</sub> O) |
| Ferrous sulphate | – | FeSO <sub>4</sub> ·7H <sub>2</sub> O                    |
| Copper sulphate  | – | CuSO <sub>4</sub> ·5H <sub>2</sub> O.                   |

### 2. Sulphides are

|                                 |   |  |
|---------------------------------|---|--|
| Iron pyrites                    | – | FeS <sub>2</sub>                                   |
| Copper pyrites or Chalcopyrites | – | Cu <sub>2</sub> FeS <sub>3</sub>                   |
| Realgar                         | – | Arsenic bisulphide As <sub>2</sub> S <sub>2</sub>  |
| Orpiment                        | – | Arsenic trisulphide As <sub>2</sub> S <sub>3</sub> |
| Cinnabar                        | – | Mercuric sulphide HgS                              |

Apart from this, there are some organic substances especially some plants which contain Sulphur. They are Radish, Onion, Garlic, Ananus, Mango, Banana etc.

### Varieties of *Gandhaka* according to different classics.<sup>[7-13]</sup>

*Shukapicchanibha (Pita)*

*Shukla (Shweta)*

*Shuka Chunchanibha, Shukatunda (Rakta)*

*Krishna (Black)*

**Table 13: Types of *Gandhaka*, their qualities and uses.<sup>[114]</sup>**

| Sl. No. | Type  | Quality         | Uses                       |
|---------|---|-----------------|----------------------------|
| 1.      | <i>Shukachunchanibham (Rakta, Shukatunda)</i> | <i>Sreshtha</i> | <i>Dhatuvada</i>           |
| 2.      | <i>Shukapicchanibham (Peeta, Amalasar)</i>    | <i>Madhyama</i> | <i>Rasayana Karma</i>      |
| 3.      | <i>Shukla</i>                                 | <i>Adhama</i>   | <i>Lepana, Loha Marana</i> |
| 4.      | <i>Krishna</i>                                |                 | <i>Jara Mrutyu Nashana</i> |

### *Grahya Lakshana of Gandhaka*<sup>[15]</sup>

The colour of genuine *Gandhaka* should resemble that of the tail of parrot (greenish yellow). Smooth, Hard, Unctuous. It should be having the luster of *Kapikacchu Beeja* and *Navanita* (soft to touch). For *Rasayanartha* and *Loha Vadartha*, it should be translucent like the fruits of *Amalaki (Amalasar Gandhaka)*.

### Pharmacological and therapeutic properties

*Rasa* : *Madhura*,<sup>[16]</sup> *Katu, Tikta, Kashaya*,<sup>[17]</sup>

*Guna* : *Ushna, Sara Snigdha*

|                       |   |  |
|-----------------------|---|--|
| <i>Virya</i>          | : | <i>Ushna</i>   |
| <i>Vipaka</i>         | : | <i>Katu</i>  |
| <i>Karma</i>          | : | <i>Deepana, Pachana, Vishahara, Jantughna, Dosha</i>           |
| <i>Prabhava</i>       | : | <i>KaphaVatahara, Pittavardhaka.</i>                           |
| <i>Vyadhi Prabhav</i> | : | <i>Kandu, Visarpa, Krimi, Kustha, Kshaya, Pleeha, Rasayana</i> |

### ***Gandhaka Dosha***

1. *Shilachurna* (Physical impurities like Clay, sand etc)
2. *Visha Dosha* (Chemical impurities like Arsenic, lead etc).

It is therefore to be purified carefully. Impure Sulphur gives rise to *Kushta, Tapa, Bhrama, Pitta Roga* and destroys *Roopa, Veerya Bala, Sukha*.<sup>[18]</sup>

When taken orally, Sulphur is converted in the small intestine in to alkali sulphides, which there by irritant action, produce a mild laxative effect. Hence it is imperative that the *Gandhaka* should be subjected to proper *Shodhana*, prescribed in the texts.<sup>[19]</sup> The toxic effects of unpurified *Gandhaka* are emphasized, especially when it is consumed without dietary regimen.<sup>[20]</sup>

### ***Gandhaka Shodhana***

There are number of different procedures for *Gandhaka Shodana*. Few are as follows.

1. *Ghee* is taken in an iron vessel and heated. Equal quantity of powdered *Gandhaka* is added to it. When it melts, it is poured in to the milk. Then this *Gandhaka* is taken out and used in all kinds of diseases,<sup>[21]</sup> and then the same which contains *Gandhaka* and milk is subjected to *Swedana* for one *Ghati*. *Gandhaka* is taken out from the milk and washed thoroughly in hot water to remove the fatty substances.<sup>[20]</sup>
2. It is very simplified process, and is advised to pour melted *Gandhaka* in the milk through cloth.
3. A vessel containing adequate amount of milk (So that all the *Gandhaka* can be immersed in it) is taken and white thin cloth is covered on its mouth and tied. In an iron ladle or a vessel equal amount of *ghee* is added to it and heated on mild fire. When *Ghee* melts, powdered *Gandhaka* is added. When *Gandhaka* melts, it is poured in a vessel containing milk through cloth.<sup>[22]</sup>
4. *Sarshapa, Tila* or *Kusmanda Taila* is taken in a vessel and heated. Then equal to tail *Gandhaka* powder is added and heated on mild fire. When *Gandhaka* melts it is

poured in a vessel containing milk. After self cooling, *Gandhaka* is removed and washed with hot water.<sup>[23]</sup>

5. Four *Pala Gandhaka* powder is kept in *Damaru Yantra*. Then it is heated on moderate fire for 4 *Prahara*. After self cooling, *Yantra* is opened, *Gandhaka* collected in the upper pot is separated and stored.<sup>[24]</sup>
6. A vessel containing milk and small quantity of ghee is taken. The mouth of the vessel is covered with a cloth and tied. The powdered *Gandhaka* is then spread over this cloth and covered with an earthen *Sharava*; and sealed air tight. This vessel, then kept inside a pit (up to neck) in the earth. Cow dung cakes are spread over the *Sharava* and ignited. *Gandhaka* liquefies and collects in the vessel containing milk. This purified *Gandhaka* is used for various preparations.<sup>[25]</sup>

Here in all procedures, in place of *Godugdha*, *Bringaraja Swarasa* can also be taken.

#### Effects of *Shodhana* on *Gandhaka*<sup>[26]</sup>

1. Physical impurities like grains of stone, sand, mud etc remains on the cloth.
2. Toxins of chemical impurities which are fat soluble will be neutralized by Ghee and milk.

**Dose of *Gandhaka***<sup>27</sup> =1-8 *Ratti*.

#### *Pathya Apathya*

*Pathya*,<sup>[28]</sup>- *Jangala Prani Mamsa* rasa and *Aja Mamsa*.

*Apathya*,<sup>[28]</sup>- salts, sour things, leaves of vegetables, pulses, intercourse with woman and traveling.

*Kshara*, *Amla*, oil, fermented liquids, fried and roasted food stuff and pulses of all kinds.<sup>[29]</sup>

#### Removal of the evil consequences of taking impure sulphur<sup>[30]</sup>

This can be done by taking 1 liter of milk with 100 gram of ghee for 2 week.

#### *Gandhaka Yogas*

|                      |                              |                             |
|----------------------|------------------------------|-----------------------------|
| <i>Kajjali</i>       | <i>Rasa Sindoora</i>         | <i>Rasa Parpati</i>         |
| <i>Loha Parpati</i>  | <i>Samira Pannaga Rasa</i>   | <i>Grahani Kapata Rasa.</i> |
| <i>Gandhaka Vati</i> | <i>Mahajvarankusha Rasa.</i> | <i>Makardwaja</i>           |

## DISCUSSION

*Gandhaka* used in many formulations in *Ras shastra* like *Kajjali*. *Kajjali* prepared by trituration process i.e *Shudha Parad* triturated with *Shudha Gandhaka* until black colour attained.

*Kajjali* ready to use if it fulfilled the Classical Parameter of *Nischandritva* and also *Varitatarva*.

Purification of *Gandhaka* is necessary because impure *Gandhaka* cause many disease like *Kustha Rog*, *Pitta Roga Bala*, *Roopa Nashaka*. During *Gandhaka* administration Some Factor keep in the mind like *Pathya Apathya*, dose etc. *Pathya* Includes *Jangala Prani Mamsa Rasa* and *Aja Mamsa*. *Apathya* includes salts, sour things, leaves of vegetables, pulses, intercourse with woman and traveling. Dose should not more than 1gm. *Gandhaka Rasayana* is most useful and effective formulation in skin disorders.

## CONCLUSION

### ***Gandhaka* Pharmacological properties**

|                        |  |
|------------------------|--|
| <i>Rasa</i>            | : <i>Madhura, Katu, Tikta, Kashaya</i>                           |
| <i>Guna</i>            | : <i>Ushna, Sara Snigdha</i>                                     |
| <i>Virya</i>           | : <i>Ushna</i>   |
| <i>Vipaka</i>          | : <i>Katu</i>  |
| <b><i>Karma</i></b>    | : <i>Deepana, Pachana, Vishahara, Jantughna, Dosha</i>           |
| <i>Prabhava</i>        | : <i>KaphaVatahara, Pittavardhaka.</i>                           |
| <i>Vyadhi Prabhava</i> | : <i>Kandu, Visarpa, Krimi, Kustha, Kshaya, Pleeha, Rasayana</i> |

*Gadhaka* used mostly in skin disorders, means *Gandhaka* subsides the *Pitta Dosha* and *Kapha Vatahara*.

## REFERENCES

1. Shri Vagbhatacharya, *Rasa Ratna Samucchaya*, Hindi translation edited by Prof. Dattatreya Ananta Kulkarni, reprint, New Delhi, Meharchand Lachhmandas publication, 3<sup>rd</sup> chapter, Verses, 2006; 2-11: 42&43.
2. Shri Gopal Krishna, *Rasendra Sara Sangraha*, English translation, edited by Dr. Ashoka. D. Satpute, 1<sup>st</sup> edition, Varanasi, Chowkhambha Krishnadas Academy publication, 1<sup>st</sup> chapter, verse 116, 59pp. *ibid*, 1<sup>st</sup> chapter, verse, 2006; 120: 60.

3. Dr. K.M. Nadkarni, Indian Materia Medica, Revised and enlarged by A. K. Nadakarni, reprint, Bombay, Popular Prakashana publication, 2005; II119.
4. Pranacharya Sadananda Sharma, Rasa Tarangini, Hindi translation, edited by Pandit Kashinath Shastri, 11<sup>th</sup> edition reprint, Varanasi, Motilal Banarasidasa Publication, 8<sup>th</sup> Taranga verses, 2004; 1-3: 174-175.
5. Shri Gopal Krishna virachita, Rasendra Sara Sangraha, English translation, edited by Dr. Ashoka. D. Satpute, 1<sup>st</sup> edition, Varanasi, Chowkhambha Krishnadas Academy publication, 2003; 1: 60-61.
6. Shri Vagbhatacharya, Rasa Ratna Samucchaya, Hindi translation edited by Prof. Dattatreya Ananta Kulkarni, reprint, New Delhi, Meharchand Lachhmandas publication, 2006; 12-44.
7. Shri Gopal Krishna, Rasendra Sara Sangraha, English translation, edited by Dr. Ashoka. D. Satpute, 1<sup>st</sup> edition, Varanasi, Chowkhambha Krishnadas Academy publication, 1<sup>st</sup> chapter verse, 2003; 117: 61.
8. Acharya Shri Madhava, Ayurveda Prakasha, Hindi commentaries, edited by Vaidya Vachaspati Shri Gulraj Sharma Mishra, reprint, Varanasi, Chaukhambha Bharati Academy publication, 2nd chapter verse, 1999; 11: 257.
9. Acharya Somadeva, Rasendra Chudamani, Hindi translation edited by Dr. Siddhinandana Mishra, 3<sup>rd</sup> edition, Varanasi, chowkhambha orientalia publication, 2004; 11(2-4): 169.
10. Bhudeb Mukerjee, Rasa Jala Nidhi or Ocean of Indian Chemistry, Medicine and Alchemy, compiled in Sanskrit text with English translation, 4<sup>th</sup> edition, Varanasi, Chaukhambha Publishers, 2004; II: 130.
11. Dr. Indradeo Tripati, Rasarnava or Rasatantram, with Rasachandrika Hindi Commentary, edited by Dr. Shri Krishna Dixit, 3<sup>rd</sup> edition, Varanasi, Chowkhambha samskrit series office, 7<sup>th</sup> Patala verse, 1995; 67-96.
12. Shri Vagbhatacharya, Rasa Ratna Samucchaya, Hindi translation edited by Prof. Dattatreya Ananta Kulkarni, reprint, New Delhi, Meharchand Lachhmandas publication, 3<sup>rd</sup> chapter, Verses, 2006; 13-15-44.
13. Dr. K.M. Nadkarni, Indian Materia Medica, Revised and enlarged by A. K. Nadakarni, reprint, Bombay, Popular Prakashana publication, 2005; II119.
14. Acharya Shri Madhava, Ayurveda Prakasha, Hindi commentaries, edited by Vaidya Vachaspati Shri Gulrajsharma Mishra, reprint, Varanasi, Chaukhambha Bharati Academy publication, 2<sup>nd</sup> chapter, 1999; 20: 261.
15. Shri Vagbhatacharya, Rasa Ratna Samucchaya, Hindi translation edited by Prof.

- Dattatreya Ananta Kulkarni, reprint, New Delhi, Meharchand Lachhmandas publication, 3<sup>rd</sup> chapter, Verses, 2006; 15-16.
16. Bhava Mishra, Bhava Prakasha, Translated by Prof. K. R. Shrikantha Murthy, English translation, 1<sup>st</sup> edition, Varanasi, Krishnadas Academy publication, Subchapter III, verses, 1998; 1(7): 207-208-547.
  17. Bhudeb Mukerjee, Rasa Jala Nidhi or Ocean of Indian Chemistry, Medicine and Alchemy, compiled in Sanskrit text with English translation, 4<sup>th</sup> edition, Varanasi, Chaukhambha Publishers, 2004; II: 131-132.
  18. Shri Gopal Krishna, Rasendra Sara Sangraha, English translation, edited by Dr. Ashoka. D. Satpute, 1<sup>st</sup> edition, Varanasi, chowkhambha Krishnadas Academy publication, 2003; 1: 63.
  19. Shri Vagbhatacharya, Rasa Ratna Samucchaya, Hindi translation edited by Prof. Dattatreya Ananta Kulkarni, reprint, New Delhi, Meharchand Lachhmandas publication, 2006; 3: 20-22-45.
  20. Shri Gopal Krishna, Rasendra Sara Sangraha, English translation, edited by Dr. Ashoka. D. Satpute, 1<sup>st</sup> edition, Varanasi, chowkhambha Krishnadas Academy publication, 1<sup>st</sup> chapter, verses, 2003; 122-123-65.
  21. Pranacharya Sadananda Sharma, Rasa Tarangini, Hindi translation, edited by Pandit Kashinath Shastri, 11<sup>th</sup> edition reprint, Varanasi, Motilal Banarasidasa Publication, 8<sup>th</sup> Taranga, verses, 2004; 7-12-176.
  22. Ibid, 8<sup>th</sup> Taranga, verses, 18-20-178.
  23. Ibid, 8<sup>th</sup> Taranga, verses, 23-25-179.
  24. Acharya Shri Madhava, Ayurveda Prakasha, Hindi commentaries, edited by Vaidya Vachaspati Shri Gulrajsharma Mishra, reprint, Varanasi, Chaukhambha Bharati Academy publication, 2<sup>nd</sup> chapter, verse, 1999; 19: 260.
  25. Shri Gopal Krishna, Rasendra Sara Sangraha, English translation, edited by Dr. Ashoka. D. Satpute, 1<sup>st</sup> edition, Varanasi, Chowkhambha Krishnadas Academy publication, 2003; 1: 65.
  26. Pranacharya Sadananda Sharma, Rasa Tarangini, Hindi translation, edited by Pandit Kashinath Shastri, 11<sup>th</sup> edition, Varanasi, Motilal Banarasidasa Publication, reprint, 8<sup>th</sup> Taranga, verse, 2004; 39: 182.
  27. Acharya Shri Madhava, Ayurveda Prakasha, Hindi commentaries, edited by Vaidya Vachaspati Shri Gulrajsharma Mishra, reprint, Varanasi, Chaukhambha Bharati Academy publication, 2<sup>nd</sup> chapter, verses, 1999; 49- 50-268.



28. Bhudeb Mukerjee, Rasa Jala Nidhi or Ocean of Indian Chemistry, Medicine and Alchemy, compiled in Sanskrit text with English translation, 4<sup>th</sup> edition, Varanasi, Chaukhambha Publishers, 2004; II: 142- 143. *ibid*, II: 146.