# Pharmace in can Research

# WORLD JOURNAL OF PHARMACEUTICAL RESEARCH

SJIF Impact Factor 8.084

ISSN 2277-7105

Volume 12, Issue 3, 478-484.

Review Article

## CRITICAL REVIEW OF GANDHAKA VATI

# K. Sai Bhavya<sup>1\*</sup> and Ch. Sridurga<sup>2</sup>

<sup>1</sup>Final Year, M.D(Ayu) Scholar, P.G Department of Rasa Shastra and Bhaishajya Kalpana, S.V Ayurvedic Medical College and Hospital, T.T.D, Tirupati, Andhra Pradesh, India. <sup>2</sup>Professor and HOD, P.G Department of Rasa Shastra and Bhaishajya Kalpana, S.V Ayurvedic Medical College and Hospital, T.T.D, Tirupati, Andhra Pradesh, India.

Article Received on 12 Dec. 2022,

Revised on 01 Jan. 2023, Accepted on 22 Jan. 2023

DOI: 10.20959/wjpr20233-27077

# \*Corresponding Author K. Sai Bhavya

Final Year, M.D(Ayu)
Scholar, P.G Department of
Rasa Shastra and Bhaishajya
Kalpana, S.V Ayurvedic
Medical College and
Hospital, T.T.D, Tirupati,
Andhra Pradesh, India.

#### **ABSTRACT**

Ayurveda is one of the most ancient health care systems. Backed by time-tested pharmacological wisdom and added with sophisticated research, *Ayurveda* currently stands as one among the chief competitors in global market of traditional therapies. *Rasa shastra* is a partially independent branch of *Ayurvedic* Medicine, which deals with metals and minerals to produce the drugs with higher efficacy, possessing innate qualities like quick action and effective in lower doses with good palatability. *Gandhaka* is an important element of *Rasa Shastra* and stands next to *Parada* in importance. *Gandhaka vati* is unique formulations which contains *Gandhaka* as main ingredient along with other drugs. The present study has been carried out to compile various *Gandhaka vati* mentioned in *Rasayogasagara*.

KEYWORDS: Rasayogasagara, Gandhaka Vati, Gandhaka.

#### INTRODUCTION

Rasayogasagara is an authentic text written by Vaidya Pandit Hariprapannaji. Rasayogasagara is a compilation of various Ayurvedic pharmaceutical formulations. Gandhaka is identified as Sulphur, grouped under Uparasa varga<sup>[1]</sup> which is used as a chief ingredient in many formulations. Gandhaka is an abundantly available and extensively used drug in the preparation of Rasaushadhi. Rasayogasagara has described 9 Gandhaka vati in its first part which contain Gandhaka as the main ingredient along with other drugs. It further deals with its utility in the management of various ailments mainly related to annavaha

*srotas*. This review is a compilation of various *Gandhaka vati* mentioned in *Rasayogasagara* along with its indications.

#### MATERIAL AND METHODS

A review was done on various *Gandhaka vati* mentioned in *Rasayogasagara* text. In the present study, each *Gandhaka vati* was analysed according to the ingredients, dose, *anupana*, *pathya* and *apathya* for better perception.

*Vati* are solid dosage forms containing medicament. *Vati Kalpana* are one of the most easiest and feasible *kalpa* among various others preparations because of its easy administration, accuracy of dosage, palatability, easiest and cheapest as regard of packing and transport.

Gandhaka vati are formulations which contain Gandhaka as the main ingredient. There are 9 different Gandhaka vati described in Rasayogasagara with different description in methodology, dose, duration etc.

#### Description of Gandhaka vati

## 1. Prathama Gandhaka vati<sup>[2]</sup>

Shuddha Gandhaka 1 part is taken in khalva yantra added with 4 parts of Sunti satva (essence of Zingiber officinale Roscae) and homogenous mixture is prepared. Bhavana is carried out with Nimbu (Citrus auruntifolia) swarasa for 7 times. Saindhava lavana is added according to taste and vati are prepared of Chana matra (Pea size). It is consumed at a dose of 1 vati after food and acts as Agnideepana and Aruchi nashaka.

# 2. Dviteeya Gandhaka vati<sup>[3]</sup>

Half pala of Shuddha Gandhaka (24g) is added with 1 karsha (12g) each of Shuddha Chitraka churna (Plumbago zeylanica), Maricha (Piper nigrum), Pippali (Piper longum), half pala (24g) of Sunti (Zingiber officinale), 1 kola (6g) of Yavakshara (alkali prepared from barley plant) and Trilavana i.e., Saindhava lavana, Sauvarchala lavana and Vida lavana. All the ingredients are taken in a khalva yantra, homogenous mixture is prepared and bhavana is carried out with Nimbu (Citrus auruntifolia) swarasa. 1 vati is consumed after meals or before food in case of Mandagni, Sula, Grahani, Ama, Gulma and Udavarta.

## 3. Tritiya Gandhaka vati<sup>[4]</sup>

1 pala (48g) of Shuddha Parada, ½ pala (24g) of Shuddha Gandhaka and Sunti (Zingiber officinale), 1 pala (48g) of Lavanga (Syzygium aromaticum Linn.) and Maricha (Piper

nigrum), 3 pala (144g) of Saindhava lavana and Sauvarchala lavana, 1 pala of Chanakamla (sour acidic medicinal preparation obtained from Chickpea) and Mulaka Kshara (Alkali of Raphanus sativus) are added in khalva yantra, homogenous mixture is prepared, bhavana is done with Nimbu swarasa for 7 times and vati of badara pramana are prepared. 1 vati of this yoga cures all types of Ajirna.

# 4. Chaturtha Gandhaka vati<sup>[5]</sup>

1 pala of Sunti churna (48g), ½ pala (24g) of Shuddha Gandhaka and ½ pala (24g) of Saindhava lavana are mixed, bhavana is done with Nimbu swarasa and vati are to be prepared. It is indicated in Ajirna and Visuchika. This is also known as Raja vati. Similar reference can be found in Yoga Chintamani gutika prakarana, Arogya prakasha and Ayurveda Sara Sangraha gutika prakarana.

## 5. Panchama Gandhaka vati<sup>[6]</sup>

1 pala (48g) of Gandhaka is taken in a vessel melted and poured in Nimba (Azadirachta indica A. Juss) swarasa for 7 times. 12 nishka (36g) of this Gandhaka is added with 12 nishka (36g) of Mishri; bhavana is done with Nimba swarasa and 3 vati are prepared. Administration of 7 vati of this cures all types of Prameha within 7 days and the patient is advised to take Sasa mamsa (meat of rabbit) as pathya during this period.

## 6. Shasta Gandhaka vati<sup>[7]</sup>

4 parts of *Sunti* is added with ½ part each of *Saindhava lavana* and *Shuddha Vatsanabha* (*Aconitum ferox* Wall.), 1 part of *Shuddha Gandhaka* and *Haritaki*; homogenous mixture is prepared and *bhavana* is carried out with *Nimbu swarasa* for 7 times. It is taken in 1 *kola* (6g) *matra* and is indicated in *Visuchika*, *Ajirna*, *Sula*, *Mandagni and Chardi*. It is also known as *Raja vati*.

#### 7. Saptama Gandhaka vati<sup>[8]</sup>

Kshara is prepared out of Triphala (Haritaki, Vibhitaki, Amlaki), Chitraka, Kadalikanda (Musa paradisica Linn), Chana (Cicer arietinum) and Arka (Calotropis gigantea Linn.) separately. To this equal quantity of Navasadara is added, bhavana is carried out with Snuhi (Euphoria nerifolia Linn) ksheera, and subjected to puta. After swangasheeta, it is added with equal quantity of Panchalavana (Saindhava lavana, Samudra lavana, Bida lavana, Sauvarchala lavana, Romaka lavana), ½ part of Shuddha Gandhaka, 4 parts each of Trikatu (Sunti, Maricha, Pippali), Chitraka, Jeeraka (Cuminum cyminum Linn) and Hingu (Ferula

foetida). The whole mixture is fried in ghee taken in a *khalva yantra* and subjected to *bhavana* with *Lasuna* (*Allium sativum*) *swarasa* and *Nimbu swarasa*, *vati* are prepared. Intake of 1 *vati* after food cures *Mandagni*, *Ajirna*, *Gulma*, *Yakrit roga*, *Pleeha roga*, and *Aruchi*.

## 8. Ashtama Gandhaka vati<sup>[9]</sup>

Shuddha Gandhaka, Maricha (Piper nigrum Linn), Chukra (Rumex vesicaris) and Sauvarchala lavana are taken in equal quantity and homogenous mixture is prepared. 3 masha (3g) of this Gandhaka vati acts as Agni vardhaka and relieves Baddha koshta.

# 9. Navami Gandhaka vati<sup>[10]</sup>

It is also known as Visuchika vidhvamsini trikatu rasayana. Lasuna, Shuddha Gandhaka, Jeeraka, Saindhava lavana, Trikatu and Hingu are taken in equal quantity in khalva yantra and homogenous mixture is prepared. Bhavana is done with Jambeera (Citrus medica) swarasa and vati are prepared. It is administered along with Nimbu, Ardraka swarasa, Saindhava lavana and Sauvarchala lavana as anupana in conditions like Sula, Visuchika, Chardi, Krimi.

#### **DISCUSSION**

Gandhaka plays an important role in preparation of Rasaushadhi. Different types of Gandhaka vati are explained in Rasayogasagara. Gandhaka has Madhura, Katu Tikta rasa, Sara, Snigdha Laghu guna; Ushna virya; Katu, Madhura vipaka; Vata-kapha shamaka, Pitta vardhaka; and properties like Deepana, Pachana, Vishaghna, Amadoshanashaka, Rasayana. Gandhaka is added with various other drugs like Sunti, Trikatu, Chitraka, Saindhva lavana etc during the processing of these Gandhaka vati. The synergistic action of these drugs enhances the therapeutic efficacy of Gandhaka. These Gandhaka vati have common indications in Annavaha sroto vikara like Ajirna, Visuchika, Sula, Chardi, Krimi.

- In the first and fourth *Gandhaka vati*, *Gandhaka* is added with *Sunti* and *Saindhava lavana*. The ingredients of the formulation have *deepana*, *pachana*, *rochana* and *avidahi* properties. It aids in digestion by stimulating digestive fire, cleanses oral cavity and acts as *aruchi nashaka*.
- In the second *Gandhaka vati*, *Shuddha Gandhaka* is added with *Chitraka*, *Trikatu*, *Chitraka* improves digestive strength by its *deepana*, *pachana* properties and helps to relieve *mandagni* and *amadosha*. *Chitraka* also acts as *sulaghna* and indicated in

Grahani. The other ingredients also have similar properties and helps in relieving mandagni, sula, grahani, ama, gulma and udavarta.

- In the third *Gandhaka vati*, *Kajjali* is added with *Sunti*, *Lavanga*, *Maricha*, *Saindhava lavana*, *Sauvarchala lavana*, *Chanakamla* and *Mulaka kshara*. *Parada* balances all the *tridosha* and has *yogavahi property*. When combined with other drugs it helps in increasing bioavailabilty of the drugs added and acts as *sarvamaya hara*.
- In the fifth *Gandhaka vati*, *Gandhaka* is purified in *Nimba swarasa*, added with *Mishri* and again the mixture is subjected to *Nimba swarasa bhavana*. *Nimba* is indicated in *meha* and *Mishri* is a *hitakara dravya*. Studies have shown that Azadirachta indica plays significant role in management of Type 2 diabetes by improving insulin signaling molecules and glucose utilization in skeletal muscle.<sup>[13]</sup>
- In the sixth *Gandhaka vati, Gandhaka* is added with *Shuddha Vatsanabha, Sunti, Haritaki* and *Saindhava lavana. Vatsanabha* has yogavahi property which can enhance the bioavailability, tissue distribution and efficacy of the other drugs.
- In the seventh *Gandhaka vati*, *Gandhaka* is added with *Kshara* prepared of various drugs, *Pancha lavana*, *Trikatu* and *Hingu*. All the ingredients are indicated in *gulma* and *udara vikara* and collectively they help in relieving *mandagni*, *ajirna*, *gulma*, *yakrit*, *pleeha* and *aruchi*.
- In the eighth *Gandhaka vati*, *Gandhaka* is added with *Maricha*, *Chukra* and *Saindhava lavana*. *Maricha* has *deepana* and *pittakara* properties. *Chukra* has *deepana*, *pachana*, *pittakrut*, *bhedi* properties and is useful in *vishtamba*. Collectively the drug acts by improving the status of the *agni* and relieving *baddha koshta*.
- In the ninth *Gandhaka vati*, *Gandhaka* is added with *Lasuna*, *Saindhava lavana*, *Jeeraka*, *Trikatu* and *Hingu*. Most of the drugs have *krimighna* and *sulaghna* properties which helps in relieving *sula*, *vibandha*, *chardi* and *krimi*.

Gandhaka, commonly known as Sulphur (S) is one of the most essential elements of human physiology. Sulphur is involved in formation of Bile salts, Fat digestion, absorption and helps in detoxification in the body. Gandhaka on internal administration gets converted into alkaline suphide and sulphureted hydrogen, which aids healthy digestion, prevents toxic buildup and purifies blood. Sulfur-containing compounds can efficiently form a line of defense against reactive oxygen and nitrogen species<sup>[14]</sup> and helps in management of oxidative stress induced pathological conditions.<sup>[15]</sup> All the drugs in Gandhaka vati have

deepana, pachana and Amadoshahara property which improves the status of agni and when the *agni* is corrected the disease also gets pacified.

#### CONCLUSION

Gandhaka vati explained in Rasayogasagara are formulations with Gandhaka as the main ingredient. All the nine Gandhaka vati have disease specific indications along with dose and anupana. Gandhaka being deepana, pachana, amajirna prashamana improves the status of agni. In Gandhaka vati, Gandhaka is added with various others drugs which collectively acts and helps in healing various ailments mainly related to *Annavaha srotas*.

#### REFERENCES

- 1. Prof. Dattatreya Anant Kulkarni, Rasa Ratna Samucchaya, Meharchand Lachhmandas Publications, reprint 2017, 3<sup>rd</sup> chapter, Sloka no: 1.
- 2. Vaidya pandit Hariprapannaji, Rasayogasagara, volume 1, Chowkambha krishnadas academy, sloka no 435, page no. 367.
- 3. Vaidya pandit Hariprapannaji, Rasayogasagara, volume 1, Chowkambha krishnadas academy, sloka no 436, page no. 367.
- 4. Vaidya pandit Hariprapannaji, Rasayogasagara, volume 1, Chowkambha krishnadas academy, sloka no 437, page no. 367.
- 5. Vaidya pandit Hariprapannaji, Rasayogasagara, volume 1, Chowkambha krishnadas academy, sloka no 438, page no. 367.
- 6. Vaidya pandit Hariprapannaji, Rasayogasagara, volume 1, Chowkambha krishnadas academy, sloka no 439, page no. 367.
- 7. Vaidya pandit Hariprapannaji, Rasayogasagara, volume 1, Chowkambha krishnadas academy, sloka no 440, page no. 368.
- 8. Vaidya pandit Hariprapannaji, Rasayogasagara, volume 1, Chowkambha krishnadas academy, sloka no 440, page no. 368.
- 9. Vaidya pandit Hariprapannaji, Rasayogasagara, volume 1, Chowkambha krishnadas academy, sloka no 440, page no. 368.
- 10. Vaidya pandit Hariprapannaji, Rasayogasagara, volume 1, Chowkambha krishnadas academy, sloka no 440, page no. 368.
- 11. Pandith Kashinath shatrina saptadita Rasa Tarangini by Pranacharya Sri Sadananda sharma, Motilal banarasidas 2009, chapter 8, sloka no: 36-38.

- 12. Prof. Dattatreya Anant Kulkarni, Rasa Ratna Samucchaya, Meharchand Lachhmandas Publications, reprint 2017, 3<sup>rd</sup> chapter, Sloka no: 16.
- 13. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4630690/
- 14. Rezk, B.M.; Haenen, G.R.; van der Vijgh, W.J.; Bast, A. Lipoic acid protects efficiently only against a specific form of peroxynitrite-induced damage. *J. Biol. Chem*, 2004; 279: 9693–9697.
- 15. Manna, P.; Das, J.; Sil, P.C. Role of sulfur containing amino acids as an adjuvant therapy in the prevention of diabetes and its associated complications. *Curr. Diabetes Rev*, 2013; 9: 237–248.