

CRITICAL REVIEW ON MALLA AS PER CLASSICS

Sindhuri K¹, Santosh S Kulkarni², Sheshidhar J³, Gopi Krishna M⁴

¹PG Scholar, ²Professor, ³ Professor, ⁴ Professor & HOD, Dept of RS & BK, SJGAMC, Koppal, Karnataka, India

Email: pathre.sindhuri@gmail.com

ABSTRACT

Rasashastra is a pharmaceutical branch of Indian system of medicine which mainly deals with the metals, minerals, animal origin product, toxic herbs and their use in therapeutics. These *Rasadravyas* have been classified into *Maharasa*, *Uparasa*, *Sadhaaran Rasa* are also included. *Malla* is second mineral drug of *Sadharana rasa* group. *Malla* is also known as *GouriPashana*. It is identified as White Arsenic or Vitreous in English. Chemically it is Arsenic trioxide. It is more toxic when compared to other two arsenic compounds of *Rasashastra*. These materials are used for internal administration only after their preliminary pharmaceutical procedures, known as *Shodhana* (purification), *Marana* (incineration) and *Sattvapataka* (extraction of essence). Here in this article, tried to compile historical review, occurrence, types, *Shodhana*, *Marana*, *Sattvapataka*, artificial preparation, dose, *Pathya*, *Apathya* of *Malla* from many *Rasa grantas*.

Keywords: *Rasashastra*, *Sadharana rasa*, *Malla*, *Gauripashana*, Arsenic trioxide

INTRODUCTION

Malla is one of essential *Sadharana Rasas*¹ which is placed second in the list. Most of *Rasagranthas* considered it under *Sadharana Rasa*. *Malla* as a drug molecule was found in *Samhitha kala* itself. It was considered under *Dhatuvisha* by *Acharya Sushruta* as *Phenashma* along with *Haratala* and both of them are considered as *Dhatuvisha*².

Vernacular names³: Kannada- Pashana, Hindi- Shankhia, English- White Arsenic, Latin- Arsenicum Album, Gujarati- Somala, Sankhiyo. Marathi- Somalakhara, Bengali- Sankhavisva, Arabian- Sanmuluphar.

Historical Review

Vedic Period (1500 B.C-800 A.D) -The Rigveda is the oldest composition and the sacred religious text of the Aryans. The Rigveda is regarded as genuine document of the period when the Aryans first established

their settlement in India i.e. 15th to 20th century B.C does not mention about *Malla*, other texts like Atharvaveda, Yajurveda, Samaveda are also devoid of *Malla* and its compounds.

Samhita Period

Charaka Samhita:-The unique text of *Atreyaparampara* on *Ayurveda* does not mentioned about *Malla*. But the references regarding other Arsenic compounds are found in many places.

Sushruta Samhita:-The oldest authentic text book for surgery also gives much emphasis on toxicity. He gave separate section (*sthana*) for poisonous substances with their classification, toxicological symptoms and when ingested their treatment. He quoted two *dhatu visha* namely '*Haratala*' and '*Phenashma*', where *Phenashma* is *Malla*.

AstangaSangraha:- In this Samhita not mentioned about *Malla*, but in *Uttarasthana* 40th chapter he added *Raktadivishas* in *dhatuvishas* of Susruta, and described same toxic effects. He added common symptoms of all *Sthavaravisha* like *Jwara* (pyrexia), *Hidhma* (Hiccup), *Dantaharsha* (sensitive tooth), *Hanustambha* (lock jaw), *Galagraha*, *Phenavami* (froathy vomiting), *Aruchi* (Anorexia), *Swasa* (Dyspnoea), *Moorcha* (Syncope) from this we can say that *Phenashmabhasma* as Arsenic trioxide due to its similarity in toxic symptoms with Modern literature and its appearance.

Rasashastra Period:- As per available texts of *Rasashastra*, *Malla* seems to be first quoted in *Rasendrachudamani* of 12th cent AD.

Rasendra Chudamani (12-13th cent AD) -Somadeva the author classified *Malla* under *Sadharana rasa*. *Pitas*, *Vikata*, *Hatachoornaka* are synonyms while *Rasabandhakara*, *Snigdha*, *Doshaghna* and *Rasaveeryakrit* are described as properties⁴.

Rasaratnasamuchchaya (13th cent AD) -*Malla* was classified under *Sadharana rasa*. He also gave description of synonyms, types, *Shodhana*, good qualities, properties; *Satwapatana* was mentioned as that of *Haratala*. *Rasabandhakara* is one of the properties of *Malla* was not observed while describing 26 types of *Paradabandha*⁵.

Rasaprakasha Sudhakara (13th cent AD) - *Yashodharabhatta* mentioned its *Swedana* in *Churnodaka* (lime water) and advised in various *Sheetavyadhis*. He further used in *Raupyanirmana*, *sumalakshara*, *sumila* and *sambhala* mentioned as synonyms.

Rasendrasarasangraha (16th cent AD) - Author *Gopalakrishnabhatta* only mentioned its name. Synonyms, *shodhana*, *marana* and properties were not described.

Rudrayamala Tantra (16th cent AD) -He mentioned *Visha* as its properties and *Mallaraja* as synonyms properties were quoted as binds all *dhatu*s, *Rasayana*, *Prameelanam*, *Gaganagrahak*, *Kaamaveeryavardhaka* etc.

Rasakamadhenu (16th cent AD) -This text gave synonyms, types, *Gunas*, indications, *Satwapatana* and *Shodhana* procedures etc.

Ayurveda Prakasha (17th cent AD) -He mentioned two types as per colour *Shweta* and *Pita*, three types as per appearance *Sphatikabha*, *Shankabha*, *Dadimbabha* and classified under *Sadharana rasa*, he further mentioned that it works like poison and used in *Rasakarma*⁶.

Yoagaratnakara (17th cent AD) -He mentioned two types *Shweta* and *Rakta* he further explains its occurrence as *Shweta* is artificial where as *Rakta* is *Parvatasambhava* and both are poisons and used for *Rasakarma*. His description also contains *Shodhana* its uses in brief but devoid of *Bhaskarana* and *Satwapatana*. *Ullipashana* a famous drug in Andhra vaidya was seems to be first appeared in these texts as per *Yoagaratnakara* it is synonyms of *Malla*⁷.

Ananda Kanda (18th cent AD) -In this text *Gauripashana* and *Akhupashana* are mentioned as separate drugs but as per later texts these terms are synonyms of *Malla*. He described *Mooshakapashana* as a synonym of *Akhupashana* having the properties of *Ruksha*, *Sara*, *Lauhasankarakaraka*, *Medodurmamsakruntana* and useful in silver making. *Pita* and *Vyaktadeha* are the synonyms of *Gauripashana* and having properties of *Rasabandhakara*, *Snigdha*, *Doshaghna* and *Rasaveeryakrit*. In the time of *Anandakanda* these two substances may be used for separate purpose like *Lauhaveda* and *Dehaveda* respectively. It is classified under *Uparasadishodhana* and *Marana*⁸.

Basavarajeyam (18th cent AD) - Author mentioned many types of *Pashanas* he described purification method for *Gauripashana* and *Ullipashana*⁹.

Rasachandamshu (19th cent AD) -He mentioned three types *Sphatikabha*, *Shankabha*, *Haridrabha* there *Shodhana* by five different procedures, three methods for *Marana* and two methods for *Satwapatana* and extensively used in *Vataraogas*¹⁰.

Rasendrabhaskara - The author gave its occurrence from the stone when the scorpion sting to stone it was found. It is mentioned as poison and having many types like *Peeta*, *Lohita* and *Sita*. He described one

Bhasma procedure and *Bhasma* in dose of *Sarshapa* is used for *Poshana* purpose.

Rasatarangini (20th cent AD) -Sadananda Sharma the author mentions two types *Shweta* and *Rakta* and are artificial and natural varieties respectively. He describes four types of *Shodhana* procedure and one *Marana* procedure but opines that it has same *Guna* as that of *ShodhitaMalla*. Advocated its use internally and externally.

Siddabhashaja Manimala- Krishnaramabhata the author mentioned extensive use in *Jwara* and *Vataroga*. The *Kupipakwakalpa* “*Mallasindoora*” is first time appeared in *Vatarogadhikarana*, *Parpatika rasa* prepared with *Rala* and *Somala*, *Himamurchana rasa*, *Malladivati* etc. *Kalpa* having *Malla* as main ingredient was appeared frequently. *Mallaprayoga* through *methi* was innovative *Kalpna* also appeared. [Add *Malla* in soil and *methi* procedure from that soil: serve to a person suffering with *Jwara*]¹¹.

Nirukti¹² - “*Mallatidharatibalamiti*” The one which does *Baladharana*, is strong, robust, to hold, Possess, Excellent.

Synonyms-

RRS –*Haathachoornaka*, *Malla*, *Sankhiya*, *Shankhavisha*, *Somala*, *Sumbalakara*, *Vikata*.¹³

RT –*Aakhupashana*, *Darumucha*, *Darumoosha*, *Gauripashana*, *Mallaka*, *Pita*, *Penashma*, *Penashmabhasma*, *Sambala*, *Shankhamusha*, *Shankhavisha*, *Somala*.

Occurrence¹⁴: -It occurs both in natural and in artificial form. To obtain this in a bulk quantity Arsenical pyrite is used, it is also available as a component of *Haratala* and *Manashila*, naturally it occurs very less in quantity.

Availability¹⁴:- In the mineral form it is available in China, Europe etc. In India Hazaaribagh (Zharkhand), Chitral mountain of Kashmir and nearby areas ob-

tained with ores of *Makshika* etc. The artificial forms are from chimneys of industries and the places where Arsenopyrites are burnt.

Physical Properties¹⁴:- When heated, *Malla* becomes soft and emits the odor like garlic. One crystalline variety of *Malla* is soluble in water, in very small quantity. The crystals of Arsenic oxide are Octahedral or Monoclinic, of which the latter is unstable. When heated with intense heat, it evaporates in the atmosphere, directly (sublimation) giving out garlic odor.

Types of Malla

Based on colour - R.T & Y. R - *Shweta*, *Rakta* A.P & R. P - *Shweta*, *Peeta*, B.R.R.S- *Shweta*, *Rakta*, *Peeta*, *Krishna*

Based on Appearance -R. R. S- *Sphatikabha*, *Shankhabha*, *Haridraba*, A.P & Y. R–*Shankhabha*, *Dadimabha*, R.C – *Vikata*, *Hatachoornaka*, R.J.N – *Haridraba*, *Rakthabha*

Based on occurrence - Natural/*Khanija/Parvatasambhava* and artificial (*Krutrima*). All the *Shweta* varieties are *Krutrima*. *Rakta* and *Peeta* are *Parvatasambhava*. According to *Rasakamadhenu* Two varieties are mentioned *Sphatikabha* and *Dadimabha*.

Grahya Malla: *SphatikabhaMalla* is of best variety, *ShankabhaMalla* is of better variety. *HaridrabaMalla* is of good quality

Need for Mallashodhana: As *Malla* is considered as *Visha*¹⁵, *Aakhupashana*, *Shankhavisha*, *Dhatuvisha*, and now a days it is prepared and available in artificial form it should be subjected for *Shodhana* prior to its internal use as medicine.

Toxic Symptoms - Sushruta- *Moorcha* (Syncope) *Galagraha*, *Phenavami* (froathy vomiting), *Aruchi* (Anorexia), *Swasa* (Dyspnoea).

Vagbhata- *Jwara* (pyrexia), *Hidhma* (Hiccup), *Dantaharsha* (sensitive tooth), *Hanustambha* (lock jaw),

Table 1: Malla Shodhana

SL NO	REF	Procedure	Drugs Used	Method	Duration
1.	R.A ¹⁶	<i>Swedana</i>	<i>Karavellaswarasa/ajadugdha</i>	<i>Dolayantra</i>	2 Yama
2.	R.J.N ¹⁷	<i>Swedana</i>	<i>Karavellaswarasa</i>	<i>Dolayantra</i>	1 Yama
3.	R.M ¹⁸	<i>Swedana</i>	<i>Godugdha</i>	<i>Dolayantra</i>	1 Yama
4.	S.Y.S ¹⁹	<i>Swedana</i>	<i>Goksheera</i>	<i>Dolayantra</i>	1 Yama

5.	R.R.S ²⁰	Swedana	Karavellaswarasa	Dolayantra	1 Yama
6.	Y.R ²¹	Pachana	Ghananadaswarasa	Dolayantra	1 Day
7.	Y.R ²²	Pachana	Manashila/yavaksharajala	Dolayantra	1 Day
8.	Y.R ²³	Pachana	Kaanji/Tankana/Godugdha	Dolayantra	2 Ghatika
9.	Y.R ²⁴	Pachana	Aja mamsa rasa	Dolayantra	2 Ghatika
10.	R.T ²⁵	Pachana	Meghanadaswarasa	Dolayantra	1 Day
11.	R.T ²⁶	Pachana	Aja rasa/Godugdha	Dolayantra	1 Day
12.	R.T ²⁷	Pachana	Karavalliswarasa	Dolayantra	2 Yama
13.	R.T ²⁸	Pachana	Tankanajala/Godugdha	Dolayantra	1 Yama

Malla Marana:

1. Tankana 2 Tula, Somala 1 Tula mix well in Khalwa yantra, keep it in Sharava, give Puta by 1 Prasthavanopala, after Puta store in Kachapatra²⁹.
2. Take a wide mouthed vessel and keep 2 PalaSuryakshara in it. Above that place 2 Palas of Hastidantachurna in such a way that it should look like a heap (i.e. wide at base and sharp at the tip). Keep this vessel on oven and heat it. When both the drugs get mixed up and there is no smoke, fire is extinguished. Take out the mixture, mix it well and preserve it. Take 2 Tolas of this in a Moosha and place 1 Tola ShuddhaMalla Khandada over it. Again, it is covered by 2 Tolas of above mixture. Mukhabandhana is done by using a Sharava and heat is given in a Lavaka Puta. By this white MallaBhasma is procured³⁰.
3. Take white ash of Kantharikashta. Take one mud pot. Fill half of it with ashes of Kantharikashta. Keep 1Karsha ShuddhaMalla above that. Remaining Kantharikashta ashes are then put over it. Keep that pot on oven and Badarakashtagni is given for 2 Yamas. After self-cooling collect the Malla Bhasma³¹.
4. Take ShuddhaMalla in a mud pot. Put 5 Karshas of Ajadugdha above that. It is covered by a cloth. Place this in a pit and cover it by 1Angula mud. Ignite 10 Vanopalas of Agni. Like this the procedure is repeated for 21 times. For each Puta, add 5 Tola Ajadugdha. By this we will get Peeta-Arunacoloured MallaBhasma³².

Malla Satvapatana³³:

Take equal parts of ShuddhaMalla and Saurashtrichurna. Both are kept in a mud pot. Add 20 Tolas Rambhatoya to it. Place one more mud pot on it and do Sandhibandhana. Keep it on oven and heat it for one Prahara. After self-cooling collect the material deposited on the upper pot. It is indicated in Shwasa, Kasa, and Jwara. It can be given along with Ghrita and Sita, Sheetajala, Dadhi, Dadhyanna. Mallasatwa is prepared as that of Haratalasatwa. Mallasatwa is Shubhra varnatmaka. Essence of Malla is similar to that of Haratala. The essence is pure White, soothing and destroyer of the three doshas. It is used in the solidification of Mercury and increases the potency of the same.

Rogagnatha— According to Rasatarangini - Amavata, Atisara, Hrididourbalya, Jirnapandu, Kapharoga, Kushta, Phiranga, Rajayakshma, Sandhigatavata, Sheetajwara, Shlipada, Sotha, Vataroga, Vishamajwara, Vrishchikadamsha.

Artificial preparation of Malla³⁴:

Haratala rubbed with Castor oil (ErandaTaila) and Lime juice (Nimbu rasa) and heated by means of a Valuka Yantra, exhibits Red Gauripashana as its essence.

Matra:

Rasatarangini- 1/120th –1/30th of Ratti. - 1/10th – 1/3rd Sarshapa

Rasatantrasara&RasaprakashaSudhakara-1 Ratti

Rasamrita-1/100-1/50 Gunja

Rasamitra-1/2 Gunja

Matra Nirmana Vidhi³⁵:-Take 1gunja of ShuddhaMalla and 15 Masha of MarichaChurna in a Khalwa and triturate with required quantity of Aard-

raka Swarasa for 3 days. Prepare 1 *Rattipramana Vatis*. 1 *vati* in the morning and one in night is given for *Doshashamana*. In this quantity itself it is added to other formulations and is used.

Care during Matranirmana:-1 *Ratti Malla* causes death. So according to *Desha, Kala, Rogibala, Dosha* etc. *Matra* is decided and given.

Fatal dose:-*Rasamrita* & *Rasatarangini*-1 *Ratti* (125mg)

Pathya³⁶:-Milk, Sugar, Butter, grams and other nutritious substances should be taken in large quantities.

Apathya:-Avoid *Amla, Katu* and *Tikshnapadartha*. Salt, chillies, oil, asfoetida and other hot and spicy things should be avoided. According to *Rasamrita Amla* and *KatuPadarthas* are avoided

DISCUSSION

Malla is classified under *Sadharana rasa* which has been accepted by many *Rasagrantas*. *Malla* was not mentioned in the Vedic period. In *Samhita* period *Acharya Charaka* has not mentioned about *Malla* but other arsenic drugs were seen. *Acharya Sushruta* has categorised *Malla* under *Dathu Visha* with the name *Penashma*. *Acharya Vagbhata* has not mentioned *Malla*. Coming to *Rasagrantas* it was first explained in *Rasendra Chudamani* book where he classified *Malla* under *Sadarana Rasa* and mentioned its synonyms, properties which include *Rasaveeryakrit*. *Rasaratnasamuchaya* has classified in *Sadarana Rasa* and mentioned its synonyms, properties, types and *Satwapatana* was mentioned as that of *Haratala*. *Rasabandhakara* is one of the properties of *Malla* was not observed while describing 26 types of *Paradabandha*. *Yogaratnakara* has mentioned two types, occurrence as *Shweta* is artificial where as *Rakta* is *Parvatasambhava*. *Anandakhanda* has classified under *Uparasa*. *Shankhabha* variety is the best which is as white as *Shankha*. Now a days it is prepared and available in artificial form it should be subjected for *Shodhana* prior to its internal use as medicine. *Shodhana* is done by *Dolayantra* with *Swedana* or *Pachana* procedures mentioned by different authors in the above table using *Karavellaka Swarasa, Godugdha, Kanji, Tanka-*

najala. The properties of *Shudha Malla* and *Haratala Bhasma* are almost similar.

Malla being very toxic and fatal, dose is mentioned in *Rasatarangini* as 1/120th to 1/130th *Ratti*, since this dose is difficult to measure for administration, he gave another reference 1/10th to 1/3rd of a *Sarshapa*. *Matra Nirmana Vidhi* is mentioned *Rasatarangini* and even precautions for dose making also been mentioned. Since 1 *Ratti* administration at once is fatal, addition of another drug to increase the bulk of the medicine is necessary. However, the dosage of *Malla* is cautiously contemplated by considering the *Roga, Bala, Desha, Kala*, etc. Therapeutical uses are *Amavata, Atisara, Hrididourbalya, Jirnapandu, Kapharoga, Kushta, Phiranga, Rajayakshma, Sandhigatavata, Sheetajwara, Shlipada, Sotha, Vataroga, Vishamajwara, Vrishchikadamsha*.

CONCLUSION

Malla is grouped under the *Sadharana rasa* which is chemically known as Arsenic trioxide. It is found in the form of native and artificial form. *Dalhana* the commentator of *Sushruta Samhita* did not comment on the *Penashma*, including P.C Ray many scholars opine that it is Arsenic trioxide or white arsenic. *Malla* seems to be first quoted in *Rasendrachudamani* of 12th cent AD. After this period *Malla* was mentioned in brief or detail in the books. *SpathikabhaMalla* is considered as the best variety. *Malla* being toxic *Shodhana* is mandatory, mainly *Dolayantra* and *Pachana* method with *Karavellaka Swarasa* and *Godugdha* is used majorly. He describes four types of *Shodhana* procedure and one *Marana* procedure but opines that it has same *Guna* as that of *ShodhitaMalla*. Very few *Rasa grantas* explained the *Marana* and *Satvapatana* for *Malla*. Therapeutic uses of *Malla* in *Sandhigatavata, Phirangaroga*, all types of *Kushta, Agnimandhya, Vishamajwara*, beneficial in severe *Swasaroga, Atisara, Amavata*, as external application it acts as *Kshara*. *Malla* being toxic and fatal the dose of it is mentioned separately which is not seen for other minerals.

REFERENCES

1. Rasavagbhata, Rasa Ratna Samucchaya, With 'Vijnaanabodhini' Hindi trans. and Commentary by Prof. Dattatreya Anant Kulkarni, Meharchand Lachmandas Publications, New Delhi, Chaukambha Amara Bharathi Prakashana, 3rd Chapter, 120th verses, 64th pp.
2. Acharya Sushruta, Sushruta Samhita, translated by Kaviraja Dr. Ambikadatta Shasthri, 14th edition, Chaukambha Samskruta Sansthan, Varanasi, 2002, Kalpasthana, 2nd Chapter, 5th verses, 17th pp.
3. Sri Yadvji Trikamji, Rasamritham, 1st Edition English translation Chaukambha Amara Bharati Prakashana, Varanasi, 1998, 4th chapter, 111th pp.
4. Acharya Somadevavirachitha Rasendrachudamani published by Chaukambhaorientalia, Varanasi, 2nd edition, 1999, 11th chapter 60th to 61st verses, pp- 5.
5. Rasavagbhata, Rasa Ratna Samucchaya, Edited by Kaviraja Sri Ambikadatta Shasthri, 9th Edition, Chaukambha Amara Bharathi Prakashana, 3rd chapter, 124-126th Verse, 80th pp.
6. Acharya Madhava, Ayurveda Prakasha, Edited by Gulraj Sharma Mishra, Chaukambha Bharati Academy, Varanasi, 1st edition, 2007, 2nd chapter, 336th verses, 338th pp.
7. Vaidya Sri Lakshmipathi Shasthri, Yogaratnakara, 6th Edition, Edited by Bhishagratna, Sri Brahmashankara Shasthri, Chaukambha Sanskrit Sansthan Publishers, Varanasi, 1st edition, 2010, Vishavarga, 166th pp.
8. Malla Bhamavignaneeyam, dissertation by Vaidya Chudamani Raghuv eerapandurangabhide submitted in Gujarat Ayurvedic University Jamnagar, 1974.
9. Basavarajeeyam 25th Prakarana.
10. Rasachandamshu or Rasaratnasamgraha, edited by Vaidyaraja data Balal Borakar, published by Sri Gajanana Book depot, Pune, 30, 1983.
11. SiddaBheshja Manimala by Sri Krishna Rama Bhatta, published by Chaukambha Krishnadas academy, Varanasi, 1st edition, 2003, jwara chikitsa prakarana.
12. Raja Radhakantadeva, Shabdhakalpadruma, Reprint 1987, Nag Publishers, New Delhi, Volume 3, 646th pp.
13. Rasavagbhata, Rasa Ratna Samucchaya With 'Vijnaanabodhini' Hindi trans. And commentary by Prof. Dattatreya Anant Kulkarni, Meharchand Lachmandas Publications, New Delhi, Chaukambha Amara Bharathi prakashana, 3rd chapter, 124th verses, 65th pp.
14. Prof. Siddi Nandan Mishra, Ayurvedeeya Rasashastra, Chaukambhaorientalia Varanasi, revised edition 2011, pp-392.
15. Vaidya Sri Lakshmipathi Shasthri, Yogaratnakara, 6th Edition, Edited by Bhishagratna Sri Brahmashankara Shasthri, Chaukambha Sanskrit Sansthan Publishers, Varanasi, 1997, Vishavarga, 166th pp
16. Yadvji Trikamji, Rasamritam, Translated by Sri Damodar Joshi, 1st Edition, Varanasi, Chaukambha Samskruta Prakashana, 1998, 14th chapter, 1st verses, 3rd pp.
17. Bhudeb Mookerjee, Rasajalanidhi, 3rd Edition, Chaukambha Publishers, 1998, 2nd vol, 3rd chapter, 213th pp.
18. Rasamitra by Acharya Tryambakanathsharma, 1st edition, 2007, Chaukambha Sanskrit series office, Varanasi, 97 pp.
19. Sidda yoga sangraha by Yadvjitrikamji acharya, 1st edition 2012, Shree Baidyanath Ayurved bhavan limited Calcutta 162 pp.
20. Rasavagbhata, Rasa Ratna Samucchaya, With 'Vijnaanabodhini' Hindi trans. And commentary by Prof. Dattatreya Anant Kulkarni, Meharchand Lachmandas Publications, New Delhi, Chaukambha Amara Bharathi prakashana, 3rd chapter, 125th verses, 65th pp.
21. Vaidya Sri Lakshmipathi Shasthri, Yogaratnakara, 6th Edition, Edited by Bhishagratna, Sri Brahmashankara Shasthri, Chaukambha Sanskrit Sansthan Publishers, Varanasi, 1997, Vishavarga, 166 pp.
22. Ibid. Vishavarga, 166th pp.
23. Ibid. Vishavarga, 166th pp.
24. Vaidya Sri Lakshmipathi Shasthri, Yogaratnakara, 6th Edition, Edited by Bhishagratna, Sri Brahmashankara Shasthri, Chaukambha Sanskrit Sansthan Publishers, Varanasi, 1997, Vishavarga, 166 pp.
25. Sadananda Sharma, Rasatarangini, 11th Edition, Edited by Kashinath Shasthri, Motilal Banarasidas, Delhi, 2004, 11th chapter, 136th verses, 266th pp.
26. Ibid. 11th chapter, 133rd -134th verses, 266th pp.
27. Sadananda Sharma, Rasatarangini, 11th Edition, Edited by Kashinath Shasthri, Motilal Banarasidas, Delhi, 2004, 11th chapter, 136th verses, 265th pp.
28. Ibid. 11th chapter, 137th verses, 266th pp.
29. Rasachandamshu, Translated in Kannada by Dr. A. Halseekar, 1850, Atreyasadana, Ganesh pet, Hubli, Poorvakhanda, 284th - 286th version, 70th pp.

30. Sadananda Sharma, Rasatarangini, 11th Edition Edited by Kashinath Shastri, Motilal Banarasidas, Delhi, 2004, 11th chapter, 171st-176th verses, 265 pp.
 31. Ibid. 287th - 288th Verses, 70th pp.
 32. Ibid. 289th - 291st Verses, 70th pp.
 33. Rasavagbhata, Rasa RatnaSamucchaya, With 'Vijnaanabodhini' Hindi trans.And commentary by Prof. Dattatreya Anant Kulkarni, Meharchand Lachmandas Publications, New Delhi, Chaukambha Amara Bharathi Prakashana, 3rd chapter, 125th verses, 65th pp.
 34. Bhudeb Mookerjee, Rasajalanidhi, Chaukambha Publishers, 3rd Edition, 1998, 2nd vol, 3rd chapter, 213th pp.
 35. Sadananda Sharma, Rasatarangini, 11th Edition, Edited by Kashinath Shastri, Motilal Banarasidas, Delhi, 2004, 11th chapter, 147th -150th verses, 269th pp. 90
 36. Dr. K. M. Nadakarni, Indian Materia Medica, 3rd Edition, Popular Prakashana, Bombay, 1996, 2nd vol, 19th pp.
-

Source of Support: Nil

Conflict of Interest: None Declared

How to cite this URL: Sindhuri K et al: Critical Review On Malla As Per Classics. International Ayurvedic Medical Journal {online} 2020 {cited April, 2020} Available from: http://www.iamj.in/posts/images/upload/3319_3325.pdf