



E-ISSN: 2321-2187  
P-ISSN: 2394-0514  
IJHM 2017; 5(4): 55-59  
Received: 28-05-2017  
Accepted: 30-06-2017

**Pundareekaksha Rao P**  
Department of Shalaky Tantra,  
Ayurveda College, Coimbatore,  
Tamil Nadu, India

## Keraliya Karnaroga Chikitsa W.S.R. to Chikitsamanjari

**Pundareekaksha Rao P**

### Abstract

Chikitsamanjari is widely used reference book by physicians of Kerala. It has mentioned simple and very effective treatment for ear diseases. Few medicinal preparations found in this book that which all are not found in classical texts. Author has described treatment related with all eight branches, but mainly focuses on Kayachikitsa. Chikitsamanjari consists of two parts. First part deals with diseases mentioned in Kayachikitsa and second half deals with other seven branches. The speciality of the book is drugs which all are used in medicine preparations are easily available, special Karnapurana preparations have been mentioned. In Karnaroga chikitsa, the treatment for pus eliminate from ear, pain in the ear, swelling of ear, foul smell from ear, insects in ears, etc have been mentioned. He mainly focused on Karnapurana for treatment of all diseases and also added some new yogas to classical treatment.

**Keywords:** Chikitsamanjari. Astanga, Kerala Karna roga chikitsa, Karnapurana

### 1. Introduction

Macropolo the famous Venitian traveller who visited Kerala during the 13<sup>th</sup> century writes that "here, in Kerala there are many good doctors and astrologers". All these people were in one way or other learned in Ayurveda. Other evidences are there to prove that a system of medicine existed in Kerala even before the advent of the Aryans. Owing to the great variations in climate and soil condition and good rainfall, Kerala had a rich and varied flora and fauna and this has definitely played a major role in the development of the medical system in Kerala. Cikitsakramam', 'Sahasrayogam', 'Yogaratnaprakasika', 'Vaidyamanjari', 'Cikitsamanjari', 'Yogamrtam', 'Cikitsanul', 'Sannipata Cikitsa', 'Netraroga Cikitsa', 'Yogasaram, Vaidyamanjari etc. are books containing the collections of the 'Yogas' (Medical recipes) and methods of treatment prevalent in Kerala well-known in the ancient families of physicians in Kerala [1].

"Chikitsamanjari" is an independent ancient and traditional medical text of kerala. The name of the Author and the period is unknown about this book (The commentator of Kairaly, is Pulamantool Mooss, who is considered to be the author of 'Cikitsamanjari') [1]. This book also named as "Valyamanjari" by Ancient scholars of Kerala. The sneha, sveda etc.. special procedures which are used only in kerala have been mentioned in this book for the upgrading the knowledge of practitioners and students. All the eight branches of Ayurveda i.e. Kayachikitsa, Balachikitsa, Grahachikitsa, Urdvangachikitsa, Salyachikitsa, Visachikitsa, Jarachikitsa, Vajikaranachikitsa have been dealt in this. Even single drug usages for the diseases have been mentioned. Generation of Astavaidyas (are called so, because they were practitioners of Ayurveda having eight branches.) and other Ayurvedic scholars used this as reference book and by heart the content. (It is interpretation. No reference for this.)

There are 13 nos. of palm leaf manuscripts in the name of Chikitsamanjari preserved in Orissa state museum out of which Ay./82 of Acc. register of OSM was given the status of "Manuscript treasure of India". This manuscript is having 109 pages and the manuscript is in good condition but it was felt that some part of the manuscript is incomplete due to lost/damage of few of the chapters [2]. However, style of this book is entirely different from those manuscripts. (It is interpretation. No reference for this.)

Chikitsamanjari consists of two parts. First part deals with diseases mentioned in Kayachikitsa and second half deals with other seven parts of Ayurveda. Diseases of Shalaky are mentioned in second part. It had been explains in detail about Netra roga chikitsa, Karna roga chikitsa, Nasa roga chikitsa, Mukha roga chikitsa, Ostaroga chikitsa, Danta roga chikitsa, Danta moola roga chikitsa, Thalua roga chikitsa, Kanta roga chikitsa, Muka paka chikitsa and Shiroroga chikitsa. In Netra roga chikitsa, the treatment of Pus in eyes, Pain in eyes, Netra pidaka, Thimira, Kacha, Redness, Heat, Vrana shukla, Raktakopa, Naktandya, Kusuma, Pushpa, Raajatha, Falling of eye lashes, Pillaroga etc. have been mentioned.

**Correspondence**  
**Pundareekaksha Rao P**  
Department of Shalaky Tantra,  
Ayurveda College, Coimbatore,  
Tamil Nadu, India

In Nasa gata roga chikitsa, the treatment for Foul smell, Pus, Pitta prathishyaya, Raktaprathishyaya, all types of Prathishyaya, Peenasa, Kasa, Kshaya, etc have been mentioned. In Osta roga chikitsa, the treatment for Cracks, Paru, etc.. have been mentioned. Dantaroga chikitsa includes the treatment for Toothache, Bleeding gums, Swelling, Loose teeth etc. In the contest of Dantamoola roga chikitsa, the measures to strengthen the Week teeth, treatment for Ulcers, Toothache etc. have been mentioned. In Jihwaroga chikitsa, treatment for upajihwika has been mentioned. He mentioned Mukapaka chikitsa along with all gargling medicines have been mentioned. In Siro roga chikitsa, treatment for Ardhavabhedaka, Suryavartha, Sirashoola, Avabheda, Daruna, Kusta, Itching of scalp, Hair growth, Pidakas, Karappan, etc have been mentioned. In Karna roga chikitsa, the treatment for Pus eliminate from ear, Pain in the ear, Swelling of ear, Foul smell from ear, Insects in ears etc.. have been mentioned. Few karnapurana preparations found in this book that which all are not found in classical texts.

## 2. Discussion

There are five types of Karnaroga mentioned i.e. Vata, Pitta, Kapha, Sannipata, Kshataja Karnaroga. He followed Susruta opinion in nidana and samprapti of Karnaroga. Instead of midyayogena sastrasya, he used as midyayogena sabdasya. He opinions Karnapippali, Snnipataja sula, Karnavidari, Kuchikarnaka diseases are difficult to cure<sup>[3]</sup>.

### 2.1 Treatment for ear pain

In Vataja Karnaroga, one should take Mamsa bojana at night followed by intake of Vatahara dravya sidha grutha. Swedana should be done for ear. Oil prepared with the leaves of Asvatha, bilva, arka, eranda (can be taken separately or altogether, mix with Saindhava lavana and taila and use orally. The svarasa of above said leaves can be used for Karnapurana in Luke warm<sup>[4]</sup>. Root pieces of bruhath panchamula are tied with cloth and burnt after dipping in oil. Oozing oil is collected in vessel and used for Karnapurana in sadyo Karnaruja (Acute ear pain). Twigs of Dhevadaru, Kusta and Sarala vruksha are tied with cloth and burnt after dipping in oil and collected oil is used for Karnapurana is good for Karnasula<sup>[5]</sup>. For Karnavedana pour swarasa of Inji (Ardraka), Kadali (Plantain), Muringa (Sigru) and Ulli (Palandu). Saindava lavana is added with Ajamutra and slightly heat it and pour it in ear for Karnasula, Karnanada and Putikarna. Prepared oil with Devadaru, Sarsapa or Sinduvara (Nirgundi) rasa is advised for Karnapurana in Karnasula. Kusta, Sunti, Vacha, Devadaru, Satahva, Hingu and Saindhava are triturated in Bastamutra and prepared oil is used for Karnapurana in Karnasula. Avoid using of cold water for head bath and in taking even during day time in Karnasula<sup>[6]</sup>.

In Pittaja Karnasula, Sarkara sidha ghrutha is used for intake and dosa is eliminated with Virechana process<sup>[7]</sup>. Kalka is prepared with Yasti, Sariva, Hima (Chandana), Ushera, Kakoli, Lodra, Jivaka, Mrunala bias and Manjista is taken in one prasta, kasaya is prepared with Yastimadhu in same quantity, double quantity (2 prasta) of Kshera, taila (2 prasta) added to this and prepared as oil. This oil is used for Nasya, Karnapurana and Abyanga in Karana sula and all types of Karna roga<sup>[8]</sup>.

In kaphaja Karnasula, patient should undergo for Vamana after attaining snigdhatta by taking pippali ghruta. Dhumapana, Navananasya, Gandusa and Sweda with the drugs which mitigate kapha should be done. It is good to use, luke worm juice of Lasuna, Ardraka, Sigru, Muringa (Sigru),

Mulaka and Kadali for Karnapurana. Prepared taila with Ajamutra, Avimutra, Vamsa(Venu) siddam taila purana or Hingu, Tumburu and Nagara is mixed with Sarsapa taila and cooked<sup>[9]</sup>. In Raktahaja Karnaroga, Pittaja Karnaroga chikitsa should be done along with bloodletting<sup>[10]</sup>. Chinchala pala svarasa sidha taila, Jambhera neer sruta taila, Brunagaraja, Sarja taila are good for Karnasula<sup>[11]</sup>. Tuvara parupu svarasa sidha, Narikodbhava taila, Grutha, Saindhava, Ardraka kalka sidha taila is used for Karnaarkota<sup>[12]</sup>.

### 2.2 Pus discharge from ear

If ear having pus discharge with foul smell (pakva durganda puya srava), first it should be suppured then according to necessity he should undergo for dhuma, gandusa, navana nasya, and common treatment principles which are explained for nadi vrana and dusta vrana are also beneficial<sup>[13]</sup>. Ear is cleaned (by using a rolled cloth) at morning and evening, dhupana done with guggulu after Karnapurana with makshika. Mix honey along with powder of Kadukka (Hareetaki) and Manjal (Haridra) in Tamra patra (copper vessel) and pour it in ear with the help of a cloth for pus in the ear<sup>[14]</sup>. In a copper vessel, powder of Manjal (Haridra) and Kadukka (Hareetaki) is added with juice of Kuvala (Vilwa) leaf is added mixed and poured in ear. It cures Chalam (Pus) in ear<sup>[15]</sup>.

### 2.3 Treatment for karnasotha (Swelling) and Karnasula (Pain)

The leaf of jackfruit is boiled in oil and that oil is poured in ear it pacifies ear pain. In the oils prepared out of Jackfruit seed, Jackfruit leaf is put and boiled. That oil is applied for swelling and pain in ear<sup>[16]</sup>.

### 2.4 Treatment for karnanada (Tinnitus), Badirya (Hearing Loss)

For karnanada and bhadirya, common vatahara treatment principles which are explained previous should be followed. If the disease is having Kaphanubanda vama, Kaphahara chikitsa also followed. Bhadirya in Bala, Vrudha, Kasa, Kshaya is difficult to cure. Rest of the other diseases prakruti, dosanusara sneha, swena, nasya, sirovasti should be done. Juice of leaves of Eranda, Sigru, Varuna and Kadali mula is cooked with 4 times of oil and 8 times of milk and add paste of Yasti, Ksherakaoli. This oil is used for Navana nasya, Abyaga and Karnapurana in Karnanada, Badirya and Karnasula<sup>[17]</sup>.

### 2.5 Treatment for karnapratinaha (Obstruction)

In Karnapratinaha, after doing Snehana, Swedana and Karnapurana should be done with oil prepared with drugs having Karna sodhana property<sup>[18]</sup>.

### 2.6 Treatment for karnakadu (Itching)

Karna purana done with Sukta, Saindhava mixed with Madu or juice of Matulunga in Karnagudha, Karnakadu and Kaphaja Karna roga<sup>[19]</sup>.

### 2.7 Treatment for karna sophia (Swelling), Putikarna (Pus) and Krimikarna (Insects)

In Karnasophia, Nasya is beneficial and Lepa should be done with Katu and Usna padartha. Katu (Sarsapa) taila Karnapurana is indicated in Putikarna and Kriminakarna<sup>[20]</sup>.

### 2.8 Treatment for puti karna (Foul smell in ear)

Tulasi (Surasa) swarasa is added in oil prepared from kalka of Paruthipoo (Flower of Kaarpasa) and used for foul smell in

ear. Honey mixed with Chukku (Shunti) kashaya is also good. Oil prepared with extract from leaves of Nirgundi, Jati, Arka, Brungaraja, Rasona, Cheruvazluthina ila (Ramba varthaka), Sigru, Surasa, Ardraka and Taravalyaha (leaf of bitter guard). This oil is good for Toda, Badirya and Puya puti karna [21]. Juice of Punnyaveram, Tulasi, Amruta, Vengaya (Onion) and Bilva patra is cooked with 4 times of oil and kalka of Triphala and Nisa (Haridra). This oil is applied for 3 days in Pratisyaya (Mookku vaarcha), Karna srava. He also advised oil cooked with juice of tender leaves of Varuna, Arka, Kapitta, Amra, Jambu or oil prepared with juice of Jathi patra is used for Karnapurana in Puti Karna [22].

### 2.9 Treatment for Krimikarna (Insects in Ear)

Karna purna with Kadu (Mustard) taila is good in Krimikarna [23]. If any insect is inside the ear, the swarasa of kalliyila (Snuhi) mixed with oil is poured. Even swarasa of vettila (Thamboola) or triphala can be used [24]. Swarasa of Erikku (Arka) and Uppu neru (Saindava jala) is heated and poured in ear for flies that has entered the ear. After insect died Karnapurana done with lavanambuna, luke worm sukta for reducing pain [25].

### 2.10 Treatment for karna vidradhi (Abscess in Ear)

First vamanakarma should be done, then follow line of treatment of vidradhi. In kshata vidradhi – treatment of pitta Karnasula is done [26].

### 2.11 Treatment for karnaarsa (Polypi), Karnaarduda (Tumour):

In Karnaarsa, Karnaarduda, treatment of nasa arsas and nasa

arbuda should be followed. In Karna vidarika, treatment is followed similar to that of apakva Karnavidradhi [27].

### 2.12 Treatment for Palisosa (For Regrowth of Ear Lobe)

In palisosa – follow the line of treatment of vataja Karnasula like nasya, lepa and sweda etc. Oil application and fomentation should do on pali. Paste of priyala beja, yasti, asvagandga is used application. Pustikara sneha abyanga also followed in this. The oil prepared with satavari, asvagandha, erandamula, jevaka, payasya, taila and used for pali pusti. Oil prepared with mixture of jevaneya gana kalka, kshera and anupa mamsa kvata is also useful for the management of Karnapali sosa [28]. Ellu (tila), amukkuru (Asvagandha) and irattimadhura (Yastimadhu) is ground in butter and is applied [29].

In tamtrika, paripota use line of treatment told for palisosa like abyanga, alepa etc. In Utpata setala ousada application should done after jalukavacharana. Jambu, amra pallava lepa is done along with visarpokta ghruta. Oil prepared with dried tail of deer (kabari suska langula) is used for ear discharge in children. Oil prepared with fat of crab (Kulira vasaya) is also effective in this [30].

### 2.13 Treatment for Karna Vedana and Karna Srava (Discharge)

Oil prepared by adding swarasa of Paruthi mottu (Bud of Karpasa), Muringa verintholi (Bark of Sigru root) and kalka of Vayambu (Vacha), Njandu (Crab), Uppu (Saindava), Velluthulli (Lashuna) can be poured in ear for Karnasrava and Karnavedana. Oil prepared by adding kalka of Paruthi mottu (Bud of Karpasa) can be poured in ear for Karnasrava [31].

Table 1: List of drugs (Malayalam) mentioned in Karnaroga chikitsa

S. No.	Drugs mentioned in book (Malayalam)	Sanskrit Name	English name
1.	Inji	<i>Ardhraka</i>	Zinger
2.	Kadali	<i>Kadali</i>	Plantain
3.	Panasa taru	<i>Panasa</i>	Jock fruit
4.	Muringa	<i>Sigru</i>	Drumstick
5.	Ulli	<i>Palandu</i>	Onion
6.	Kadukka	<i>Hareetaki</i>	Myrobalan
7.	Manjal	<i>Haridra</i>	Turmeric
8.	Kuvala	<i>Vilva</i>	Bael
9.	Paruthi	<i>Karpasa</i>	Cotton plant
10.	Tulasi	<i>Surasa</i>	Holy basil
11.	Cukku	<i>Shunti</i>	Dry Zinger
12.	Kadu	<i>Sarsapa</i>	Mustered
13.	Ellu	<i>Tila</i>	Sasamum
14.	Amukkuru	<i>Asvagandha</i>	Winter cherry
15.	Irattimadhura	<i>Yastimadhu</i>	Liquorice/Sweet root
16.	Kalliyila	<i>Snuhi</i>	Common milk hedge
17.	Vettila	<i>Thamboola</i>	Betel leaf
18.	Triphala	<i>Amalaki Hareetaki Vibeetaki</i>	Emblic Myrobalan, Myrobalan Beleric Myrobalan
19.	<i>Erikku</i>	<i>Arka</i>	Madar
20.	Vayambu	<i>Vacha</i>	Sweet flag
21.	Velluthulli	<i>Lasuna</i>	Garlic
22.	Tara valyaha	<i>Karavellaka</i>	Bitter guard
23.	Tuvara parupu	<i>Tuvari</i>	Pigeon pea

**Table 2:** Details of drugs mentioned in Karnaroga chikitsa [32]

S. No.	Drugs mentioned in book	Latin name	Family	Pat used
1.	Inji	<i>Zingiber officinale</i> Rosc.	Zingiberaceae	Rhizome
2.	Kadali	<i>Musa paradisiaca</i> L.	Musaceae	Stem
3.	Panasa taru	<i>Artocarpus heterophyllus</i> Lam.	Moraceae	Leaf and seed
4.	Muringa	<i>Moringa oleifera</i> Lam	Moringaceae	Leaf, Root bark
5.	Ulli	<i>Allium cepa</i> L.	Liliaceae	Bulb
6.	Kadukka	<i>Terminalia chebula</i>	Combretaceae	Fruit
7.	Manjal	<i>Curcuma longa</i> L.	Zingiberaceae	Rhizome
8.	Kuvala	<i>Aegle marmelos</i> (L.) Corr.	Rutaceae	Leaf
9.	Paruthi	<i>Gassypium herbaceum</i>	Malvaceae	Flower, Bud
10.	Tulasi	<i>Ocimum basilicum</i> L.	Lamiaceae	Leaf
11.	Cukku	<i>Zingiber officinale</i> Rosc.	Zingiberaceae	Rhizome
12.	Kadu	<i>Brassica nigra</i> (Koch) Deutsch.	Brassicaceae	seeds
13.	Ellu	<i>Sesamum indicum</i> L	Pedaliaceae	Seeds
14.	Amukkuru	<i>Withania somnifera</i>	Solanaceae	Root
15.	irattimadhura	<i>Glycyrrhiza glabra</i>	Leguminaceae	Root
16.	Kalliyila	<i>Euphorbia nerifolia</i> L.	Euphorbiaceae	Latex
17.	Vettila	<i>Piper betle</i>	Piperaceae	Leaf
18.	Triphala Amalaki Hareetaki Vibeetski	<i>Embllica officinalis</i> <i>Terminalia chebula</i> <i>Terminalia belerica</i>	Euphorbiaceae Combretaceae Combretaceae	Fruit
19.	Erikku	<i>Calotropis gigantea</i> (L.) R. Br.	Asclepiadaceae	Latex
20.	Vayambu	<i>Acorus calamus</i> L.	Araceae	Rhizome
21.	Velluthulli	<i>Allium sativum</i> L.	Liliaceae	Bulb
22.	Karavellaka	<i>Momordica charantia</i>	Cucurbitaceae	Leaf
23.	Tuvara parupu	<i>Cajanus indicus/cajan</i>	Fabaceae	Seed

**Table 3:** Details of other items mentioned in Karnaroga chikitsa

S. No.	Drugs mentioned in book	Sanskrit name	English name
1.	Bastra mutra	Ajamutra	Urine of goat
2.	Avimutra	Avimutra	Urine of sheep
3.	Saindhava	Saindhava lavana	Rock salt
4.	Navanetha	Navanetha	Butter
5.	Uppuneru	Lavanodaka	Salt water
6.	Njandu	Sambuka/ Kulira	Crab
7.	Madhu	Madhu	Honey
8.	Ksheera	Kseera	Milk
9.	Uppu neru	Saindava jala	Rock salt water

### 3. Conclusion

Chikitsamanjari is widely used reference book by physicians of Kerala. It is a user friendly text for the guidance of students and physicians. It has mentioned simple and very effective treatment for ear diseases. Few karnapurana preparations are found in this book that which all are not found in classical texts.

### References

1. Variar PR. The Ayurvedic heritage of Kerala, Ancient Science of Life. 1985; 5(1):54-64.
2. Nanda GC. Vijnananidhi chikitsa manjari - the manuscript treasure of India- A bird's eye view, Int. J. Ayur. Pharma Research. 2016; 4(5):12-16.
3. Nambudri DS. Chikitsamanjari. Edition, Sloka, Vidyarambam publishers, Alappuzha. 2015; 1(3):491.
4. Nambudri DS. Chikitsamanjari. Edition, 2015, Sloka, Vidyarambam publishers, Alappuzha. 2015; 4(5):491-492.
5. Nambudri DS. Chikitsamanjari. Edition, 12, Sloka, Vidyarambam publishers, Alappuzha. 2015; 6(7):492.
6. Nambudri DS. Chikitsamanjari. Edition, 12, Sloka, Vidyarambam publishers, Alappuzha. 2015; 8(12a):493.
7. Nambudri DS. Chikitsamanjari. Edition, 12, Sloka, Vidyarambam publishers, Alappuzha. 2015; 12b:493.
8. Nambudri DS. Chikitsamanjari. Edition, 12, Sloka,

Vidyarambam publishers, Alappuzha. 2015; 13(15)493-494.

9. Nambudri DS. Chikitsamanjari. Edition, 12, Sloka, Vidyarambam publishers, Alappuzha. 2015; 16-18: 494.
10. Nambudri DS. Chikitsamanjari. Edition, 12, Sloka, Vidyarambam publishers, Alappuzha. 2015; 19:494.
11. Nambudri DS. Chikitsamanjari. Edition, 12, Sloka, Vidyarambam publishers, Alappuzha. 2015; 52:501.
12. Nambudri DS. Chikitsamanjari. Edition, 12, Sloka, Vidyarambam publishers, Alappuzha. 2015; 53:501-502.
13. Nambudri DS. Chikitsamanjari. Edition, 12, Sloka, Vidyarambam publishers, Alappuzha. 2015; 20:494.
14. Nambudri DS. Chikitsamanjari. Edition, 12, Sloka, Vidyarambam publishers, Alappuzha. 2015; 21-22:495.
15. Nambudri DS. Chikitsamanjari. Edition, 12, Sloka, Vidyarambam publishers, Alappuzha. 2015; 24:496.
16. Nambudri DS. Chikitsamanjari. Edition, 12, Vidyarambam publishers, Alappuzha Sloka. 2015; 23:495-496.
17. Nambudri DS. Chikitsamanjari. Edition, 12, Vidyarambam publishers, Alappuzha Sloka. 2015; 25-28:496.
18. Nambudri DS. Chikitsamanjari. Edition, 12, Sloka, Vidyarambam publishers, Alappuzha. 2015; 29:497.
19. Nambudri DS. Chikitsamanjari. Edition, 12, Sloka, Vidyarambam publishers, Alappuzha. 2015; 30:497.

20. Nambudri DS. Chikitsamanjari. Edition, 12, Sloka, Vidyarambam publishers, Alappuzha. 2015; 31:497.
21. Nambudri DS. Chikitsamanjari. Edition, 12, Sloka, Vidyarambam publishers, Alappuzha. 2015; 32-33:497.
22. Nambudri DS. Chikitsamanjari. Edition, 12, Sloka, Vidyarambam publishers, Alappuzha. 2015; 34-35:497-498.
23. Nambudri DS. Chikitsamanjari. Edition, 12, Sloka, Vidyarambam publishers, Alappuzha. 2015; 36:498.
24. Nambudri DS. Chikitsamanjari. Edition, 12, Sloka, Vidyarambam publishers, Alappuzha. 2015; 47:500.
25. Nambudri DS. Chikitsamanjari. Edition, 12, Sloka, Vidyarambam publishers, Alappuzha. 2015; 48-49:501.
26. Nambudri DS. Chikitsamanjari. Edition, 12, Vidyarambam publishers, Alappuzha Sloka. 2015; 37:498.
27. Nambudri DS. Chikitsamanjari. Edition, 12, Vidyarambam publishers, Alappuzha Sloka. 2015; 38:498-499.
28. Nambudri DS. Chikitsamanjari. Edition, 12, Sloka, Vidyarambam publishers, Alappuzha. 2015; 39-42:499.
29. Nambudri DS. Chikitsamanjari. Edition, 12, Sloka, Vidyarambam publishers, Alappuzha. 2015; 43:499-500.
30. Nambudri DS. Chikitsamanjari. Edition, 12, Sloka, Vidyarambam publishers, Alappuzha. 2015; 44-46:500.
31. Nambudri DS. Chikitsamanjari. Edition, 12, Sloka, Vidyarambam publishers, Alappuzha. 2015; 50-51:501.
32. Sastry JLN. Illustrated dravyaguna vijnana. Edition, Chowkhamba orientalia, Varanasi. 2008, 1(2).