

## ACTION MECHANISM OF KSHARA BASTI IN THE MANAGEMENT OF AMAVATA ROG: A REVIEW

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### ABSTRACT

*Amavata* is a chronic inflammatory disease which is occurred due to frequently formation of *Ama* in the human body. *Amavata* is one of the commonest disorders caused by the impairment of *Agni*, formation of *Ama* and vitiation of *Vata*. It is the commonest among chronic inflammatory joint disease in which joints becomes swollen, painful and stiff. Due to its chronicity and complications it has taken the foremost place among the joint disease. Patients are continuously looking with a hope towards Ayurveda to overcome this challenge due to merely insufficient management of this disease in other system of

medicine. Chakrapani laid down the principle and line of treatment of *Amavata*. It includes *Langhana*, *Svedana*, drugs having *Tikta*, *Katu*, *Rasa* and *Deepana* action, *Virechana*, *Snehapana* and *Anuvasana* as well as *Kshara Basti*. *Basti* is considered as best procedure to control the vitiated *Vata Dosha*. *Acharya Chakrapani* specially recommended *Kshara Basti* in the *Chikitsa Sutra* of *Amavata*. *Kshara Basti Dravyas* has *Lekhana* and *Rukshna* properties which is antagonist to *Ama Dosha* it reduces the increased *Ama Sanchaya* in *Srotasa*. Thus helpful in disease *Amavata*.

**KEYWORDS:** *Amavata*, *Nidana Panchaka*, *Chikitsa*, *Basti*, *Kshara Basti*.

### INTRODUCTION

In present time, due to modern life style, very busy schedule, stress, and many other reasons, incidence of diseases are increasing day by day, one of them is *Amavata*. *Acharya Madhavakara* was the first author who has described *Amavata* as a separate disease entity in

his text "*Madhava Nidana*" where it is stated that *Mandagni* plays a key role in the manifestation of the disease. There is a complete chapter containing detail description of the disease regarding definition, Aetiopathogenesis, clinical manifestations, complications and prognosis of *Amavata*. *Amavata* described in *Ayurvedic* classics is similar to Rheumatoid Arthritis in Various means. Cardinal symptoms such as *Sandhishoola*, *Sandhigraha*, *Sandhi Sotha*, etc. These symptoms resemble the cardinal features of rheumatoid arthritis, i.e., pain, swelling, stiffness, fever, general debility, etc.<sup>[1]</sup> Rheumatoid arthritis is most common inflammatory arthritis in women. The typical clinical phenotype of RA is a symmetrical, deforming, small and large joint polyarthritis, often associated with systemic ana disturbance and extra-articular disease.<sup>[2]</sup>

Rheumatoid arthritis occurs throughout the world and in all ethnic groups. The prevalence is lowest in black Africans and chinese, highest in pima Indians of Arizona. In Caucasians it is around 1.0-1.5% with a female: male ratio of 3:1. Before the age of 45, the female: male ratio is 6:1. Prevalence increases with age with 5% of women and 2% of men over 55 years being affected.<sup>[3]</sup>

## REVIEW OF DISEASE AMAVATA

### NIRUKTI (Etymology)

Word *Ama* associated with *Vata dosha* is called as *Amavata*.<sup>[4]</sup> It specify that the *Ama* and *Vata* are the two dominating factor in the occurence of disease *Amavata*.

### Definition of Amavata

*Acharya Madhava* was the first scholar who describe the *Amavata* as a separate disease entity. He also give the convenient definition of *Amavata* as<sup>[5]</sup> "when vitiated *Vata* and *Ama* together enters in the *Kostha*, *Trika* and *Sandhi pradesha* governing to stiffness of the body. This terrible disease is wellknown as *Amavata*."

### Nidana (Etiology) of Amavata

In *Madhava Nidana* following specific *nidana* which is responsible for occurence of *Amavata* has been described.<sup>[6]</sup>

1. *Viruddhahara* (Indulgence of conflicting food habits)
2. *Viruddha chesta* (Indulgence of incompatible habits)
3. *Mandagni* (Hypofunctioning of digestive fire)
4. *Snigdha bhuktavato vyayama* (Doing exercise after taking fatty foods)

5. *Nischalata* (Lack of physical activity)

### Roopa (Signs and Symptoms) of Amavata

#### 1. Pratyatma Roopa (Cardinal symptoms)<sup>[7]</sup>

- (a) *Sandhi shoola* (Pain in joints)
- (b) *Sandhi shotha* (Swelling in joints)
- (c) *Stabdhata* (Stiffness)
- (d) *Sparshashatva* (Tenderness)
- (e) *Sashabda sandhi* (Crepitation of joints)

2. **Samanya Roopa (General Signs and Symptoms)** The general Signs and Symptoms in the context of *Amavata* described by *Acharya Madhavakara* are as follows:<sup>[8]</sup>

- i) *Angamarda* (Bodyache)
- ii) *Aruchi* (Anorexia)
- iii) *Trishna* (Thirst)
- iv) *Alasya* (Laziness)
- v) *Gaurava* (Heaviness)
- vi) *Jvara* (Pyrexia)
- vii) *Apaka* (Indigestion)
- viii) *Angasunyata* (Swelling in the body parts)

#### 3. Pravridha Roopa (Severe signs and symptoms) of Amavata

*Acharya Madhavakara* illustrated the *pravridha roopa of Amavata* as follows:<sup>[9]</sup>

*Saruja sandhi shotha* (pain with swelling in joints), *vrishikdanshvata vedana* (Intensive pain like scorpion bite), *Agnidourbalya* (Hypofunctioning of digestive fire), *Praseka* (Excessive salivation), *Aruchi* (Anorexia), *Gaurava* (Heaviness in the body), *Utsahahani* (Lack of enthusiasm), *Mukhavairasya* (Inappropriate oral taste), *Daha* (Burning sensation), *Bahumootrata* (Excessive urination), *Kukshikathinyta* (Abdominal distension), *Kukshishoola* (Abdominal colic), *Nidraviparayaya* (Insomnia), *Trishna* (Excessive thirst), *Chhardi* (Vomiting), *Bhrama* (Giddiness), *Murchha* (Fainting), *Hridgraha* (Myocardial complications), *Vidvibaddhata* (Constipation), *Jadayata* (Stiffness of body), *Antrakujana* (Abnormal peristaltic movement), *Anaha* (Flatulence).

### Samprapti (Pathogenesis) of Amavata

The Aetiopathogenesis of *Amavata* illustrated in *Madhava Nidana* is as follows.<sup>[10]</sup>

The person who is having *Mandagni* (Poor digestive fire) if he indulges in incompatible diet habits, lack of physical activity or doing *vyayama* after taking *Snigdha Ahara* leads to formation of *Amarasa* in their body. This *Amarasa* with the influence of vitiated *Vata Dosha* reaches the main seats of *Sleshma* in the body like *Amashaya*, *Sandhi*, *Uraha*, *Shira* and *Kantha*, filling them and the *Dhamnies*. Here in *Dhamnies* (blood vessels) *Amarasa* unites with *Pitta* and *Kapha dosha* and by getting much vitiation attaining different colours and blocks the tissue pores (*strotansi*) and passages with this *picchila* (waxy) material. In this way the stasis of the vitiated *doshas* and *dushya* along with *Ama* in the *Sleshmashaya* takes place this is called *Sthanasamsarya* stage of *Samprapti*. After this the process of *Dosha-Dushya Sammurchhana* takes place and finally complete the *Samprapti* of *Amavata*. The clinical manifestations such as *Daurbalya* (Weakness), *Hrid gaurava* (Heaviness in the heart), *Gatra stabdhata* (Stiffness of body) such as *Trika Sandhi* (lambo-sacral joint, neck joint) are produced at this stage. This is a dreadful disease and become a cause of many other disease also.

### Samprapti Ghataka of Amavata<sup>[11]</sup>

*Dosha - Vatakaphapradhana Tridosha, Vavu(Samānavāyu, Vyānavāyu) Pitta(Pāchaka Pitta)*

*Kapha(Kledaka, shleshak)*

*Dushya - Rasa, Rakta Mamsa, Asthi, Snayu, Sandhi, Kandara,*

*Agni - Jatharagni, Medodhatwagni*

*Srotasa - Rasavaha*

*Srotodusti - Sanga, Vimargamana*

*Adhithana - Shleshma Sthana(Sandhi)*

*Udhbhav Sthana - Ama, Pawashayottha*

*Vyakta Sthan - Sarva Shareera especially Sandhi*

*Rogmarga - Madhyama*

*Ama - Jatharagnimandyajanit, Dhatwagnimandyajanit*

*Vyadhi Swabhava - Chirkari*

### Treatment Principles of Amavata

Acharya Chakrapanidatta was first who described the basic principle for the line of treatment and drugs for Amavata. Further texts Bhavapraksha and Yogratnakar followed the same guideline. He described *Chikitsa* sutra for *Amavata* as follows:<sup>[12]</sup>

*Langhana*

*Svedana*

Use of drugs which are having *Tikta, Katu Rasa* and *Deepana* properties

*Virechana*

*Snehana*

Anuvasana and Kshara Basti

### **Basti**

Among the three *Doshas*, *Vata Dosha* plays key role in the *Samprapti* of *Amavata* and Basti is considered as best procedure to control the vitiated *Vata Dosha*.

In *Amavata* both *Anuvasana Basti* as well as *Niruha Basti* has been recommended. There is no remedy more beneficial than the administration of *Taila* particularly in affliction of *Vata Dosha*. *Taila* which is used in *Anuvasana Basti*, by its *Snigdha, Guru* and *Ushna Guna* counteracts the *Ruksha, Laghu* and *Sheeta Guna* of *Vata Dosha* respectively. Thus *Anuvasana Basti* reduces the *Rukshata* of the body caused by *Amahara Chikitsa* like *Deepana* and *Pachana*, control *Vata Dosha*, increases the function of *Agni* and give nourishment to the body.<sup>[13]</sup> *Chakrapani* has recommended *Brihat Saindhavadya Taila* for *Anuvasana Basti* in *Amavata*. It increases the *Agni* and alleviates all sorts of *Vatika* disorder particularly *Amavata, Vata* located in *Kati, Janu, Uru Sandhi, Parshava, Hridaya* region.<sup>[14]</sup>

*Niruha Basti* expell out the *Mala, Shleshma, Pitta, Vata Dosha* sanchaya, brought into the *kostha* by *Deepana, Pachana Snehana*, and *Swedana* measures. Besides these generalised effects, it also strengthens the local function of the *Kostha* and remove the *Anaha, Vibanadha, Antrakujana* etc.<sup>[15]</sup>

*Acharya Chakrapani* specially recommended *Kshara Basti (Asthapana Basti)* in the *chikitsa sutra* of *Amavata*<sup>[16]</sup> hence it was selected for the present study.

### **Ingredients of Kshara Basti<sup>[17]</sup>**

1. *Saindhava Lavana* : 1 Aksha (10 gm)
2. *Shatavaha* :1 Aksha (10 gm)
3. *Gomutra* : 8 Pala (400 ml)
4. *Chincha* : 2 Pala (100gm)
5. *Guda* : 2 Pala (100 gm)
6. *Tila Taila* :30-50 ml

### Method of Preparation

- Initially 100 gm of Jaggary (*Guda*) was mixed uniformly with equal quantity of lukewarm water so as to make the solution dense to be used as honey.
- 10 gm (1 Aksha) of Saindhava lavana was added to the above and mix well.
- Moorchita Tila taila* is added 30-50 ml and churn well till the mixture becomes homogenous.
- Shatavaha kalka is added 10 gm (1 Aksha) and mix well to above mixture.
- Chincha* 2 Pala (100gm) is put first in hot water, mixed well & filtered. Then the liquid is added to the above mixture.
- Lastly 400 ml (8 Pala) of *Gomutra* was added slowly and mix well so as to have uniform *Basti Dravya*.

### PROPERTIES OF KSHARA BASTI DRAVYAS<sup>[18]</sup>

S.N.	Dravya	Rasa	Guna	Virya	Vipaka	Doshaghata	Action and uses
1	Saindhava lavana	Lavana, Madhur	Laghu, Snigdha Sukshma, Tikshna	Sheeta	Madhura	Tridosahara	Deepana, Rochana,
2	Shatavaha	Katu, Tikta	Laghu, Ruksha, Tikshna	Ushna	Katu	Vatakaphahara	Deepana, Pachana, Anulomana
3	Gomutra	Katu, Tikta Kashaya	Tikshna ushna, laghu	Ushna	Katu	Vatakaphahara	Deepana, pachana, Lekhana
4	Chincha	Madhura, Amla	Ruksha, Laghu	Ushna	Amla	Vatakaphahara	Deepana, Rochana
5	Guda	Madhura	Snigdha, Laghu	Natisheeta	Madhura	Vatapittahara	Deepana, pachana
6	Tila Taila	Madhur, Tikta Kashaya	Snigdha Tikshna, Guru, sara, sukshma, vyavayi, vishad vikasi	Ushna	Madhura	Vatakaphahara	Deepan, Pachanaka Lekhana

### AVYAVAPRABHAVA OF KSHARA BASTI

The Avyavaprabhāva proportionate distribution of properties in the *Kshara Basti* is arithmetically accessed and given below:

#### 1. Proportionate distribution of Rasa

Rasa	%
Lavana	16.66
Madhura	66.66
Kashāya	33.33
Katu	33.33
Tikta	50.00
Amla	16.66

**2. Proportionate distribution of Veerya**

<i>Veerya</i>	%
<i>Natisheeta</i>	16.66
<i>Sheeta</i>	16.66
<i>Ushna</i>	66.66

**3. Proportionate distribution of Vipāka**

<i>Vipāka</i>	%
<i>Madhura</i>	50
<i>Amla</i>	16.66
<i>Katu</i>	33.33

**4. Proportionate distribution of Doshaghnatā**

<i>Doshghnta</i>	%
<i>Tridosahara</i>	16.66
<i>Vatapitta Shamaka</i>	16.66
<i>Vātakapha Shāmaka</i>	66.66

**5. Proportionate distribution of Guna**

<i>Guna</i>	%
<i>Snigdha</i>	50.00
<i>Ruksha</i>	33.33
<i>Laghu</i>	83.33
<i>Guru</i>	16.66
<i>Tikshna</i>	66.66
<i>Sukshma</i>	33.33
<i>Uhna</i>	16.66
<i>Sāra</i>	16.66
<i>Vishad</i>	16.66
<i>Vyavāyi</i>	16.66
<i>Vikasi</i>	16.66

**6. Proportionate distribution of Mukhya karma**

<i>Mukhya karma</i>	%
<i>Deepana</i>	100

<i>Pachana</i>	66.66
<i>Rochana</i>	33.33
<i>Lekhana</i>	33.33
<i>Anulomana</i>	16.66

### **ACTION MECHANISM OF KSHARA BASTI ON AMAVATA**

*Kshara Basti* is also a type of *Asthapana Basti*. On the basis of chief drugs it is called *Kshara Basti*. In this *Basti*, maximum quantity is of *Gomutra* which is having *Kshara Guna*. *Kshara* has the property of *Lekhana* and *Rukshana* which are antagonistic to *Ama* and is very much required in the conditions like *Amavata*.

As a whole the qualities of *Kshara Basti* can be considered as *Laghu*, *Tikshna*, *Ruksha Guna*, *Ushna Veerya*, *Katu Vipaka*. Majority of the drugs are having *Vata-kaphashamaka* and *Deepana*, *Pachana* action. Owing to this property, antagonism to *Kapha* and *Ama*, it help in significant improvement in sign and symptom of disease. The *Tikshna Guna* of *Basti* help in overcoming the *Srotodushti* resulting due to 'Sanga'.

#### **On the basis of Rasa of Kshara Basti**

*Kshara Basti* has *Madhura Rasa* dominance 66.66% followed by *Tikta Rasa* 50%, *Katu Rasa*, 33.33% and *Kashaya Rasa* 33.33%.

**Madhura Rasa** - it is having *Snigdha* and *Guru Guna* which counteracts the *Ruksha* and *Laghu Guna* of *Vata Dosha*.

**Tikta Rasa** - It has *Khara*, *Ruksha*, And *Laghu Guna* which is opposite to *Guna* of *Ama Dosha*. It is having *Deepana*, *Pachana Karma* which increases the *Agni* hence it digest the *Ama* and reduced the increased *kleda sanchaya* in the body.

**Katu Rasa** - It is having predominance of *Vayu* and *Agni Mahabhoota Ruksha*, *Ushna*, *Laghu Guna*, and *Deepana*, *Pachana* properties which is opposite to *Ama Dosha*. Hence it digest the *Ama* and reduced the increased *Kleda Sanchaya* in the body.

**Kashaya Rasa** - It is having *Ruksh*, *Laghu Guna*, and *Kleda Upshoshaka* properties which reduces the *Ama Dosha*.



**On the basis of Guna-** It has *Laghu Guna* dominance 83.33% followed by *Tikshna Guna* 66.66%, *Snigdha Guna* 50%, *Ruksha Guna* 33.33%, *Sukshma Guna* 33.33%.

**Laghu Guna** - It is having dominance of *Vayu, Agni, and Akash Mahabhutas* and it is opposite to *Guru Guna* of *Ama Dosha* hence *Laghu Guna* increases the *Agni* and digest *Ama*.

**Tikshna Guna-** *Tikshna Guna* is dominance of *Agni Mahābhuta, Lekhana* and *Shodhana* properties by that it removes *Ama sanchaya* in *Srotasa*, thus it help in removing obstruction in *Srotasa*. *Ama sanchaya in srotasa* is main pathogenesis of this disease By removing *Ama sanchaya* it helps in *Samprapti vighatana* of *Amavata*.

**Snigdha Guna-** *Snigdha Guna* counteracts the *Ruksha Guna* of *Vata Dosha* which pacify the vitiated *Vata Dosha* in the disease *Amavata*.

**Ruksha Guna-** *Ruksha Guna* helps in counteracting the *Ama* by its opposite *Guna* and *Shoshana* property which is chief pathogenic factor of the disease *Amavata*.

**Sukshma Guna-** Because of its *Vāyu, Ākasha* and *Agni Mahābhuta* dominance, It helps the drug to reach up to the cellular level is capable of liquefying the viscid matter and breaking it into minute particles.

#### **On the basis of Veerya**

*Kshara Basti* has dominance of *Ushna Veerya* 66.66%. *Ushna Veerya* has dominance of *Agni Mahabhuta*. It has *Laghu, Tikshna Guna, and Ushna Veerya* which is liable for the reduction of *Ama*. It also has *Deepana, Pachana, and Vatakaphashamaka* properties. As a result of *Deepana, Pachana Karma Basti Dravya* increases *Agni* at all level hence it reduces *Ama* and helps in *Samprapti vighatana* of *Amavata*.

#### **On the basis of Vipaka**

*Kshara Basti* is having dominance of *Madhura Viapaka* 50% and *Katu Vipaka* 33.33%.

**Madhura Viapaka-** It has *Snigdha* and *Guru Guna* which is opposite *Guna* of *Vata* thus it helps in pacifying the vitiated *Vata Dosha* in *Amavata*.

**Katu Vipaka** - Because of its *Laghu* and *Ruksha Guna* reduces excessive *Ama sanchaya* in *Srotasa*. It also counteracts increases *Kapha*.

**On the basis of Doshakarma**

*Kshara Basti* is having predominance of *Vatakaphashamaka* property 66.66%. *Kapha* and *Vata* are the main *Doshas* involve in the pathogenesis of *Amavata* Disease.

**On the basis of Mukhyakarma**

*Kshara Basti* has *Deepana karma* dominance 100% followed by *Pachana Karma* 66.66%.

***Deepana, Pachana karma*** - *Deepana, Pachana Dravyas* having predominance of *Agni* and *Vayu Mahabhootas, Ushna, Tikshna, Laghu Guna* by this properties it increases the *Agni* which helps in digestion of *Ama*. *Mandagni* and *Ama* is main causative factor in the disease *Amavata*. Thus *Deepana* and *Pachana karma* helps in *Samprapti Vighatana* of this disease.

**CONCLUSION**

It can be concluded that hypo functioning of *Agni* otherwise called as *Mandagni* is largely responsible for the formation of *Ama*. These *Ama* and *Vata* are the two main predominant factors responsible for the pathogenesis of this disease. *Basti* is considered as a best procedure in chikitsa of *Vata Dosh*. It keeps all the five types of *Vāta* in their normal status by affecting its *Seat-Pakvāsaya* and while prepared with *Kshara Basti Dravyas* having *Lekhana* and *Rukshna* properties which is antagonist to *Ama Dosh* it reduces the increased *Ama snchaya* in *Srotasa*. *Basti* not only have localized action, but the active principles of *Basti* drugs are absorbed and reaches through channels of the body at the site of lesion and bring about systemic action. So *Kshara Basti* mentioned in the above references from classics, by virtue of its *Rasa, Guna, Veerya, Vipaka, Doshakarma, Mukhyakarma and shodhana* properties are useful to reduce *Vāta-kapha Dushti*, increases *Agni*, digests the *Āma*, remove *Sanga* in *Srotasa*. Thus, it becomes helpful in *Samprapti Vighatana* of disease *Amavata*.

**REFERENCES**

1. Golwalla Medicine for the student Aspi F. Golwalla & Sharukh A. Golwalla, 20<sup>th</sup> Edition 2003 pn. 975.
2. Davidson's principles and practice of medicine – Nicholas A. Boon, Nicki R. Colledge, Brian R. walker, John A.A. Hunter, Churchill Livingstone Elsevier Publication, 20<sup>th</sup> edition 2006 P.N.1101.
3. Davidson's principles and practice of medicine – Nicholas A. Boon, Nicki R. Colledge, Brian R. walker, John A.A. Hunter, Churchill Livingstone Elsevier Publication, 20<sup>th</sup> edition 2006 P.N.1101.

4. Ayurvediya Vishwa Kosha –II, Shri Babu Ramjeet Singh Vaidya, Daljeet Singh Vaidya, Publisher–Shri Pandit Vishveshwar Dayalu Ji Vaidyraj, Baralokpur Itava(U.P.) P.N. 1038.
5. Madhava Nidana with madhukosha Sanskrit Commentary and with the Vidyotini Hindi Commentary and Notes Part -I Shri Sudarshana Shastri and Prof. Yadunandana Upadhyaya, M.Ni.25/5, Chaukhambha Sanskrit Sansthan P.B. No. 1139 K - 37/116, Gopal mandir lane Golghar (near Maidagin) V aranasi – 221001, Reprint Edition 2060 P.N. 509.
6. Madhava Nidana with madhukosha Sanskrit Commentary and with the Vidyotini Hindi Commentary and Notes Part -I Shri Sudarshana Shastri and Prof. Yadunandana Upadhyaya, M.Ni.25/1, Chaukhambha Sanskrit Sansthan P.B. No. 1139 K - 37/116, Gopal mandir lane Golghar (near Maidagin) V aranasi – 221001, Reprint Edition 2060 P.N. 508.
7. Shrimad Agnivesh maharshi pranita Anjan Nidana Vidyotini Bhasha Teeka, Teekakar Pandit Brahma Shankar Mishra, Publisher Chaukhambha Sanskrita Series Varanasi P.N. 38-39.
8. Madhava Nidana with madhukosha Sanskrit Commentary and with the Vidyotini Hindi Commentary and Notes Part -I Shri Sudarshana Shastri and Prof. Yadunandana Upadhyaya, M.Ni.25/6, Chaukhambha Sanskrit Sansthan P.B. No. 1139 K - 37/116, Gopal mandir lane Golghar (near Maidagin) V aranasi – 221001, Reprint Edition 2060 P.N. 511.
9. Madhava Nidana with madhukosha Sanskrit Commentary and with the Vidyotini Hindi Commentary and Notes Part -I Shri Sudarshana Shastri and Prof. Yadunandana Upadhyaya, M.Ni.25/7-10, Chaukhambha Sanskrit Sansthan P.B. No. 1139 K - 37/116, Gopal mandir lane Golghar (near Maidagin) V aranasi – 221001, Reprint Edition 2060 P.N. 511.
10. Madhava Nidana with madhukosha Sanskrit Commentary and with the Vidyotini Hindi Commentary and Notes Part -I Shri Sudarshana Shastri and Prof. Yadunandana Upadhyaya, M.Ni.25/2-5, Chaukhambha Sanskrit Sansthan P.B. No. 1139 K - 37/116, Gopal mandir lane Golghar (near Maidagin) V aranasi – 221001, Reprint Edition 2060 P.N. 509.
11. Kaya chikitsa, Sharma Ajay Kumar(vol.2), Chaukhambha Orientalia, Varanasi, Reprint edition 2014; P.N. 531.

12. Chakradatta of Chakrapanidatta with Vaidayaprabha Hindi Commentary By Dr. Indradeva Tripathi, Editor- Prof. Ramanath Dwivedi, 25/1 Publisher- Chaukhambha Sanskrit Sansthan Varanasi, Reprint Edition 2005 P.N. 166.
13. Ch. Siddhi Sthana. 1/30-31 Charak samhita Vol-2, Charak Chandrika hindi commentary by Dr. Brahanand Tripathi, reprint edition 2005, chaukhambha Surabharti Prakashan, varanasi P.N. 1167.
14. Chakradatta of Chakrapanidatta with Vaidayaprabha Hindi Commentary By Dr. Indradeva Tripathi, Editor- Prof. Ramanath Dwivedi, 25/48 Publisher- Chaukhambha Sanskrit Sansthan Varanasi, Reprint Edition 2005 P.N. 169.
15. Ch. Siddhi Sthana. 1/28- Charak samhita Vol-2, Charak Chandrika hindi commentary by Dr. Brahanand Tripathi, reprint edition 2005, chaukhambha Surabharti Prakashan, varanasi P.N. 1166.
16. Chakradatta of Chakrapanidatta with Vaidayaprabha Hindi Commentary By Dr. Indradeva Tripathi, Editor- Prof. Ramanath Dwivedi, 25/1 Publisher- Chaukhambha Sanskrit Sansthan Varanasi, Reprint Edition 2005 P.N. 166.
17. Chakradatta of Chakrapanidatta with Vaidayaprabha Hindi Commentary By Dr. Indradeva Tripathi, Editor- Prof. Ramanath Dwivedi, Niruhadhikar 29-31 Publisher- Chaukhambha Sanskrit Sansthan Varanasi, Reprint Edition 2005 P.N. 455.
18. The Ayurvedic Pharmacopeia of India part 1, vol-1 to 6, Government of India, Ministry of Health and Family welfare department of AYUSH.