

Effect of Ayurvedic Medicines in the Management of Vartma Sharkara with special reference to Conjunctival Concretions – Pilot Study

K G Surangi^{1*} and Shamsa Fiaz²

^{1,2}Postgraduate Department of Shalaky Tantra, National Institute of Ayurveda, Jaipur, Rajasthan, India

Abstract

On the basics of Ayurveda *Rasa* (taste), *Guna* (properties and qualities), *Virya* (potency), *Vipaka* (post digestive action) and *Prabhava* (special effect) are the five interrelated working factors in a drug. Hence a physician should be considered the vitiated *Doshas* and *Dhatu*s of a specific disease and prescribed the medicines while considering those particular drugs' working factors. *Vartma Sharkara* is one of the *Sannipataja Vartmagata Roga* (disorders in eyelids) and is a curable by *Lekhana Karma* (scraping procedures). It can be correlated with "Conjunctival concretion" or "Lithiasis" which is a degenerative condition of the conjunctiva. Treatments are not essential if it is asymptomatic but if it gives symptoms should be removed by hypodermic needle under topical anaesthesia which is almost all the time causes conjunctival damages, sometimes conjunctival inflammations. Thus this study was planned to develop a successful, safe and sustainable line of treatment in the management of conjunctival concretion or *Vartma Sharkara* according to the principles of Ayurveda. The present study was carried out at the eye OPD of NIA, Jaipur as per the exclusion and inclusion criteria. The line of treatment was mainly focused on *Shodhana* (purification), *Lekhana* (scraping) and *Santarpana* (Nourishing) type of medicines. Hence *Samudraphena Varti Pratisarana* and *Anjana, Thriphaladi Netra Parisheka* and *Ashwagandha – Shatavari* powder orally were selected. The uniqueness of this therapy was concretion can be removed without causing any damage to the conjunctiva. The results proved that *Varma Sharkara* or conjunctival concretion can be successfully managed with Ayurvedic treatments without any adverse effects.

Keywords

Vartma Sharkara, Conjunctival Concretions, Pratisarana, Netraparisheka, Rasayana



Greentree Group

Received 28/11/16 Accepted 23/12/16 Published 10/01/17



INTRODUCTION

Ayurveda is a holistic system of medicine which has been practiced more than 5000 years. It is based on theories and personal experiences of physicians as well. Formulations of Ayurveda are herbal, mineral, animal or herbo-mineral in origin and which are processed pharmaceutically for their therapeutic effect. Ayurveda has a high demand in global drug market because of its long term practice without any adverse effects. According to the basics of Ayurveda system of medicine *Rasa* (taste), *Guna* (properties and qualities), *Virya* (potency), *Vipaka* (post digestive action) and *Shakti* or *Prabhava* (special effect) are the five interrelated working factors of a drug¹. Hence a physician should consider the vitiated *Doshas* and *Dhatu*s of a specific disease and prescribed the medicines while considering the specific properties of that particular drug.

Vartma Sharkara is one of the *Vartmagata Roga* (disorders in eyelids) which is explained among the twenty one types of *Vartma Rogas* described in *Susruta Samhitha*². All the three *Doshas* are involved in this disease (*Sannipataja*) and is curable by *Lekhana Karma* (scraping procedures)³.

Vartma Sharkara is characterized by a hard large *Pidaka* (eruption) with surrounding small densely arranged number of *Pidakas* inside the eye-lid⁴. As per the *Vagbhata* there are 24 eyelid disorders and named *Vartma Sharkara* as *Sikata Vartma*. He described *Sikata Vartma* as *Pidaka* (eruptions) which are hard, rough, dry and resembling sand appearing inside the lids⁵. Thus it can be said that the *Vartma Sharkara* or *Sikata Vartma* is a kind of small, hard, whitish (resembling sugar-*Sharkara*) or yellowish brown (resembling sand-*Sikata*) *Pidaka* or eruptions in the posterior surface of the eyelids (palpebral conjunctiva) without any discharge.

These characteristic features of *Vartma Sharkara* or *Sikata Vartma* can be correlated with “Conjunctival concretions” or “Lithiasis” in Allopathic system of medicine. Concretions are considered as a degenerative condition of the conjunctiva which are formed due to accumulation of inspissated mucus and dead epithelial cell debris of palpebral conjunctiva into the conjunctival depressions called loops of Henle⁶. However these are not calcareous deposits. Thus the name concretion is a misnomer. Concretions are seen in upper palpebral conjunctiva than the lower and

also in the lower fornix which are yellowish white in colour. These are hard, raised areas with varying size from pin point to pin head (usually <1mm, sometimes up to 3mm) and commonly seen in elderly people⁶⁻⁸. The aetiological factors are variable but most commonly associated with aging and chronic inflammations such as chronic conjunctivitis (trachoma or vernal), severe atopic conjunctivitis and meibomian gland disease ie. old chalazion. It is also associated with recrystallization of certain eye drops (sulfadiazine)⁸⁻⁹. Conjunctival concretions are generally asymptomatic but if it is raised above from the conjunctiva commonly give symptoms such as eye discomfort, eye irritation, lacrimation and foreign body sensation. Sometimes the larger, harder or multiple concretions can cause corneal abrasion. In severe cases dysfunction or inflammation of the meibomian glands may occur^{6-7,10}.

Treatments are not essential if it is asymptomatic. However, for the control of its progression artificial tears during day time and lubricating eye ointment at bed time are prescribed. Whereas if it gives symptoms like foreign body sensation, irritation etc. concretions should be removed by hypodermic needle under topical anaesthesia. This concretion removal by hypodermal needle almost all the time causes conjunctival damage and bleeding. Most of the time it may be a cause for following conjunctival inflammations. Thus this study was planned to overcome this problem and to evolve a sustainable treatment modality to treat conjunctival concretions or *Vartma*

Sharkara.

AIM

To develop a successful, safe and sustainable line of treatment in the management of conjunctival concretion or *Vartma Sharkara* according to the principles of Ayurveda.

MATERIALS AND METHODS

Ten patients who attended eye OPD in the National Institute of Ayurveda, Jaipur, Rajasthan, India with conjunctival concretion were selected as per the inclusion and exclusion criteria's.

Inclusion Criteria

Patients with conjunctival concretions who complained of eye discomfort or eye irritation, lacrimation and foreign body sensation and who were willing to participate were selected for the present study irrespective of their age, race, religion,

sex, caste and socio-economic status.

Exclusion Criteria:

Patients having asymptomatic conjunctival concretion were excluded.

Diagnosis Criteria:



Patients were diagnosed by using diffuse torch light and findings were further verified by the slit lamp examination.

Assessment Criteria:

The assessment was done before treatment and after treatment with follow-up after one month. The signs and symptoms were assessed by self-designed scoring system, described in the Table No.1

Table No. 1 Scoring system for the assessment

| Symptom | Scoring System | | | |
|--------------------------------------|-----------------------------|---|--|--|
| | 1- Absent | 2 - Mild | 3 - Moderate | 4 - Severe |
| 01.Foreign body sensation of the eye | No foreign body sensation | Occasionally present and not disturbing daily routine | Frequently present and disturbing daily routine | Present continuously disturbing daily routine |
| 02. Eye discomfort or irritation | No discomfort or irritation | Occasionally present and not disturbing daily routine | Frequently present and disturbing daily routine | Present throughout the day and disturbing daily routine |
| 03.Excessive lacrimation | No excessive lacrimation | Occasionally present, no need to wipe with handkerchief | Frequently present, needs to wipe with handkerchief and not disturbing daily routine | Present throughout the day, needs to wipe with handkerchief disturbing daily routine |

Treatments

The line of treatment was mainly focused to *Shodhana* (purification), *Lekhana* (scraping)

and *Santarpana* (Nourishing) type of medicines. Thus following drugs were selected for the present condition.

1. *Netra Pratisarana* or *Lekhana Karma* (scraping procedure) with *Samudraphena Varti*
2. *Anjana Karma* with *Samudraphena Varti* two times a day with bee honey
3. *Thiphaldi Netra Parisheka* – done for 3 minute with 30ml of decoction twice a day
4. Powder of roots of *Withania somnifera* (*Ashvagandha*) and *Asparagus recemosus* (*Shatavari*) 3 grams of each with milk for 2 times a day

Treatment number 2, 3 and 4 were continued for 7 days compulsory and those were continued more as required according to the severity of the disease. Meanwhile number of *Pratisarana* (treatment No.1) was decided as per the severity of disease.

Thriphalādi Netra Parisheka contains equal quantity of powder of *Terminalia berelica* (*Vibhitaka*), *Terminalia chebula* (*Haritaki*), *Phyllanthus embilica* (*Āmla*), *Glycyrrhiza glabra* (*Yashtimadhu*) and *Symplocos racemosa* (*Lodhra*) which is a commonly used formula in eye OPD of the National Institute of Ayurveda.

Samudraphena Varti consists of Rock salt (*Saindava Lavana*), bone of cuttle fish



(Purified *Samudraphena*), *Bhashma* of conch (*Shankha Bhashma*), *Bhashma* of hens' egg shell (*Kukkutānda Twak Bhashma*) and seeds of *Moringa olefera* (*Shiggru Beeja*)¹¹⁻¹²

Data analyzing and Statistical methods:

All the data was analyzed by Microsoft Excel-2007 and presented as percentages.

OBSERVATIONS AND RESULTS

Pharmacological properties of *Samudraphena Varti* is shown in Table No. 2 and all the ingredients contain *Lekhana* or scraping action which is the best treatment for *Vartma Sharkara* as most of the ingredients have *Ruksha-Tikshna Guna* and

Katu Vipaka. Table No. 3 shows the properties of *Thriphaladi Netra Parisheka*. All of the ingredients contain *Chakshushya* property and *Kashaya rasa* (except *Glycyrrhiza glabra*) which is responsible for the purification action and pacifying of *Kapaha Dosha*. Maximum 80% of them have *Madhura Vipaka* which is important for pacifying *Pitta Dosha*. *Ahvagandha – Shatavari* powder contained *Rasayana* (rejuvenation) and *Vata* pacifying properties and some drugs contain *Pitta - Kapha* pacifying and *Chakshushaya* properties. Table No. 4 displays the pharmacological properties of *Ahvagandha – Shatavari* powder.

Table No.2 Pharmacological properties of *SamudraphenaVarti*

| Name of the drug | Rasa | Guna | Virya | Vipaka | Dosha karma |
|--|-------------------------|-----------------------------|--------|---------|--|
| Rock salt (<i>Saindava Lavana</i>) ¹³ | Madhura | Laghu Snigdha | Sita | | Chakshushya |
| Bone of cuttle fish (Purified <i>Samudraphena</i>) ¹⁴ | Kashaya | | Sita | | Chakshushaya, sara, Lekhana, Kapha nashaka |
| <i>Bhashma</i> of conch (<i>Shankha Bhashma</i>) ¹⁵ | Katu | Laghu Ruksha Tikshana | Ushna | Katu | Lekhana Kapha-Vata Shamaka Deepana, Pachana |
| <i>Bhashma</i> of hens' egg shell (<i>Kukkutānda Twak Bhashma</i>) | Not found in literature | | | | |
| <i>Moringa olefera</i> (<i>Shiggru Beeja</i>) ¹⁶ | Katu Tikta | Laghu Ruksha Tikshna | Ushana | Katu | Kapha-vata Shamaka, Lekhana, Chakshushya |
| Bee honey (<i>Madhu</i>) ¹⁷ | Madhura Kashaya | Laghu Ruksha Vishada | Sita | Madhura | Lekhana, Chakshushya Vata-pittahara |

Table No.3 Pharmacological properties of *Thriphaladi Parisheka*

| Name of the drug | Rasa | Guna | Virya | Vipaka | Dosha karma |
|------------------|------|------|-------|--------|-------------|
|------------------|------|------|-------|--------|-------------|



| | | | | | |
|---|-------------|--------------|--------|---------|---|
| <i>Terminalia chebula</i> (Haritaki) ¹⁸ | Pancha rasa | Laghu Ruksha | Ushana | Madhura | Chakshushya, Rasayana |
| <i>Terminalia berelica</i> (Vibhitaka) ¹⁹ | Kashaya | Laghu Ruksha | Ushana | Madhura | Chakshushya, Kapha-pitta Nashaka |
| <i>Phyllanthus embilica</i> (Āmla) ²⁰ | Pancha rasa | Laghu Ruksha | Sita | Madhura | Chakshushya, Rasayana Thridoshajit |
| <i>Glycyrrhiza glabra</i> (Yashtimadhu) ²¹ | Madhura | Guru Snigdha | Sita | Madhura | Chakshushya, Balya Vata-pittajit |
| <i>Symplocos racemosa</i> (Lodhra) ²² | Kashaya | Laghu | Sita | Katu | Chakshushya Kapha-pitta nashaka, Grahi |

Table No.4 Pharmacological properties of *Ashvagandha-Shatavari* powder

| Name of the drug | Rasa | Guna | Virya | Vipaka | Dosha karma |
|--|------------------|-----------------|--------|---------|--|
| Roots of <i>Withania somnifera</i> (Ashvagandha) ²³ | Kashaya Tikta | Lagu | Ushana | Madhura | Kapha-vata shamaka Rasayana Balya |
| Roots of <i>Asparagu recemosus</i> (Shatavari) ²⁴ | Madhura Tikta | Guru Snigdha | Siita | Madhura | Vata-pitta shamaka Rasayana Balya, Netrya |
| Cows' milk ²⁵ | Madhura | Guru, Snigdha | Sheeta | Madhura | Rasayana, Vata-pitta shamaka |

It was observed that 80% of the patients were females and 70% of them were above 50 years of age. Almost all the patients were live in urban area and frequently exposure to heat or sunlight. Majority, 90% of them had history of conjunctival infections at least a single time during last one year and 70% were engaged in near work more than 8 hours per day in their daily routing. Maximum 70% of them were vegetarians and 60% belonged to Hindu families. While considering the presence of concretion, 70% had it in the upper eye lid, 30% in lower eyelid and 40% in both the upper and lower lids. Meanwhile 70% of them had

concretions only in one eye and 30% had in both the eyes. Also 30% showed multiple concretions as bulks, 50% of them had 1-3 concretions and rest (20%) had more than 3 concretions but not present as bulks.

Table No. 5 shows the progression of the treatment. As per that patient No. 1, 2 and 4 had masses of concretions (30%); hence *Pratisarana* therapy was performed several times once or twice a week until it was completely removed. Rest of the cases had only single, less or more than 3 concretions and were not present as bulks; hence done only one time *Pratisarana* and prescribed *Samudraphena Varti Anjana* for one week.

These patients (60%) were relieved from ocular discomfort or foreign body sensation just after the *Pratisarana* therapy. Almost all the patients were relieved from all the

symptoms after the treatment. Figure No.1 and 2 shows the photographs of before and after treatment of patient no.1, respectively.

Table No 5 Progression of the treatment

| Patient No | Symptoms | | | | | | | | | Number of Pratisarana | Duration of treatment |
|------------|--------------|----|----|-----------------------|----|----|-------------|----|----|-----------------------|-----------------------|
| | FB sensation | | | Discomfort/irritation | | | Lacrimation | | | | |
| | BT | AT | AF | BT | AT | AF | BT | AT | AF | | |
| 1. | Sev | Ab | Ab | Sev | Ab | Ab | Mild | Ab | Ab | 4 | 6 weeks |
| 2. | Sev | Ab | Ab | Sev | Ab | Ab | Mod | Ab | Ab | 7 | 8 weeks |
| 3. | Mod | Ab | Ab | Mod | Ab | Ab | Ab | Ab | Ab | 1 | 2 weeks |
| 4. | Mod | Ab | Ab | Mod | Ab | Ab | Mild | Ab | Ab | 2 | 2 weeks |
| 5. | Mild | Ab | Ab | Mild | Ab | Ab | Mild | Ab | Ab | 1 | 1 week |
| 6. | Mild | Ab | Ab | Mild | Ab | Ab | Ab | Ab | Ab | 1 | 1 week |
| 7. | Mild | Ab | Ab | Mild | Ab | Ab | Ab | Ab | Ab | 1 | 1 week |
| 8. | Mild | Ab | Ab | Mild | Ab | Ab | Ab | Ab | Ab | 1 | 1 week |
| 9. | Mild | Ab | Ab | Mild | Ab | Ab | Ab | Ab | Ab | 1 | 1 week |
| 10. | Mild | Ab | Ab | Mild | Ab | Ab | Ab | Ab | Ab | 1 | 1 week |

BT-before treatment

AT- After treatment

AF- After follow up

Sev- Severe

Mod- Moderate

Ab- Absent

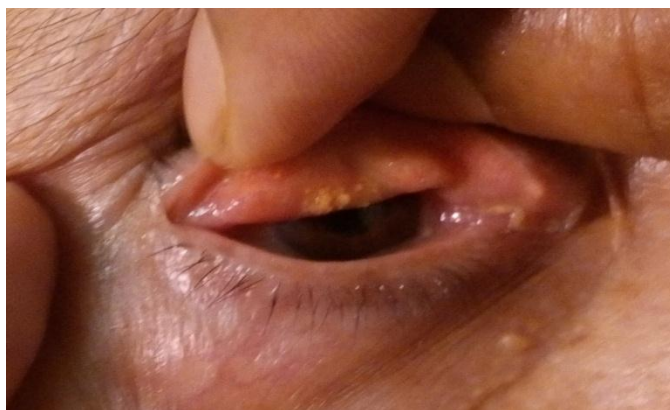


Figure No. 1 Photograph of before treatment of patient No.1

Figure No.2 Photograph of after treatment of patient No1

DISCUSSION

According to the signs and symptoms mentioned in Ayurvedic classics *Vartma Sharkara* or *Sikara Varma* can be correlated with conjunctival concretion which is a degenerative condition of the conjunctiva. Old

age and anterior segment chronic inflammations are the main causative factors of concretion. The present study also confirmed those factors and another aetiological factors also i.e. exposure to heat or sunlight frequently and long term exposure



to near work which are the causative factors of eye diseases mentioned in Ayurvedic authentic texts. Concretions are more common in upper lids and present study (70%) also confirmed it.

Treatment is not essential if it is asymptomatic. However, if it is present with symptoms it is advised to remove by hypodermic needle under topical anaesthesia. The concretion removal by hypodermal needle causes conjunctival damages with bleeding and most of the time it may be a cause for following conjunctival inflammations unless treated with a topical antibiotic. Ayurveda advices to perform *Lekhana Karma* or removal by scraping. *Samudraphena Varti* which is a *Lekhana* type of *Anjana* was indicated for *Avrana Shukla* or corneal opacities in authentic texts but it contains *Tikshna*, *Ruksha* properties and *Lekhana* action. Hence *Samudraphena Varti Pratisarana* was advised to remove *Vartma Sharkara*. The uniqueness of this therapy is that concretion can be removed without causing any damage to the conjunctiva. Hence there is no need of antibiotics. The number of *Pratisarana* shall be depending on the severity of the disease. However it was easy to remove concretions which are elevated from the conjunctival epithelium. Those which are at the

level of conjunctiva should be managed with using of *Samudraphena Varti Anjana* without *Pratisarana*.

Triphaladi Netra Parisheka with lukewarmed decoction was performed to better purification of the eye. It was also helpful for the eliminating the irritation or foreign body sensation after the *Pratisarana* or *Anjana* therapy. Also it increases blood circulation inside the lids which increases drug absorption. Further *Triphaladi Netra Parisheka* consists with *Chakshushya* drugs (eg. *Thiphala*, rock salt, *Yashtimadhu* and *Lodra*) which are beneficial for the healthy maintenance of eye and has anti inflammatory and antimicrobial properties too²⁶⁻²⁹.

Concretion is a degenerative condition; thus it is needed to prescribe rejuvenation therapy. Hence *Ashvagandha-Shatavari* powder was recommended with cow's milk due to *Rasayana* property of ingredients. This *Rasayana* property will be helpful for the preventing recurrence of the disease as well. All the three *Doshas* involved in *Varma Sharkara* were pacified with the three formulations which had *Thridosha* pacifying ingredients.

CONCLUSION

Hence it can be concluded that the above mentioned line of treatment is ideal remedy for the management of *Varma Sharkara* or conjunctival concretion because it completely cured almost all the signs and symptoms without any adverse effects. It was further proved that the treatment had a sustained effect even after one month of follow up period. This study can be evaluated on a large sample size to effectively assess the treatment.



REFERENCES

- 1- Sarangadhara Samhitha of Sarangadhara (2012), Prathama Khanda 2/13, English Translation by K R Srikantha Murthy, Chaukhambha Orientalia, Varanasi, 11
- 2- Susruta Samhitha of Susruta (2010), Uttara tantra 3/5-9, English translation by P V Sharma, Vol III, 1st edition, Chaukhambha Vishvabharati, Varanasi, 118
- 3- Susruta Samhitha of Susruta (2010), Uttara tantra 8/9, English translation by P V Sharma, Vol III, 1st edition, Chaukhambha Vishvabharati, Varanasi, 149
- 4- Susruta Samhitha of Susruta (2010), Uttara tantra 3/12, English translation by P V Sharma, Vol III, 1st edition, Chaukhambha Vishvabharati, Varanasi, 119
- 5- Ashtanga Hridayam of Vagbhata (2012), Uttara sthana 8/18, English Translation by K R Srikantha Murthy, Vol III, 6th edition, Chowkhamba Krishnadas Academy, Varanasi, 77
- 6- Khurana A. K. (2012), Comprehensive Ophthalmology, 5th edition, New Age International (P) Limited Publishers, New Delhi, 81
- 7- Samar K Basak (2013), Essentials of Ophthalmology, 5th edition, Current Books International, Kolkata, 153
- 8- http://eyewiki.aao.org/Conjunctival_concretions, access date 11/06/2016
- 9- <file:///C:/Users/User/Desktop/Conjunctival%20concretions%20-%20EyeWiki.htm>, access date 11/06/2016
- 10- http://www.eastlancseyecare.co.uk/eye_care_conditions_concretions.php, access date 11/06/2016
- 11- Yogaratnakara, Uttarardha(2008), Netra roga chikithsa/ 272, English Translation by K R Srikantha Murthy, Vol II, 1st edition, Chowkhamba Sanskrit Series Office, Varanasi, 1121
- 12- Sharangadhara Samhitha of Sarangadhara (2012), Uttara Khanda 13/79, English Translation by K R Srikantha Murthy, Chaukhambha Orientalia, Varanasi, 266
- 13- Susruta Samhitha of Susruta(2013), Sutrasthana 46/315, English translation by P V Sharma,



Vol I, Chaukhambha Vishvabharati, Varanasi, 521

14- Rasatar angani of Sri Sadananda Shastri (1976), Chap 12/113,114, Edited by Kashinatha Shastri, Mokilal Baranasi Das, Varanasi, 305

15- Ayurveda Pharmacopeia of Sri Lanka (1985), Vol I, Part III, The department of Ayurveda, Sri Lanka, Colombo, 420

16- Ministry of Health and Family Welfare (2004), AYUSH, Government of India, Ayurveda Pharmacopoeia of India, Vol I, Part IV/52, 1st edition, The Controller of Publications Civil Lines, Delhi, 128

17- Bhavaprakasha of Bhavamishra (2004), Madhu Varga, Vidyotini Hindi Commentary, Edited by Brahmashankara Mishra, , Part I, 11th edition, Chaukhambha Sanskrit Sansthan, Varanasi, 788

18- Ministry of Health and Family Welfare (2011), AYUSH, Government of India, Ayurveda Pharmacopoeia of India, Vol VIII, Part I/ 29, 1st edition, The Controller of Publications Civil Lines, Delhi, 93

19- Ministry of Health and Family Welfare (2011), AYUSH, Government of India, Ayurveda Pharmacopoeia of India, Vol I, Part I / 17, 1st edition, The Controller of Publications Civil Lines, Delhi, 34

20- Ministry of Health and Family Welfare (2011), AYUSH, Government of India, Ayurveda Pharmacopoeia of India, Vol VIII, Part I/ 1, 1st edition, The Controller of Publications Civil Lines, Delhi, 5

21- Ministry of Health and Family Welfare (2011), AYUSH, Government of India, Ayurveda Pharmacopoeia of India, Vol VIII, Part I/57, 1st edition, The Controller of Publications Civil Lines, Delhi, 177

22- Ministry of Health and Family Welfare (2011), AYUSH, Government of India, Ayurveda Pharmacopoeia of India, Vol I, Part I / 53, 1st edition, The Controller of Publications Civil Lines, Delhi, 112

23- Ministry of Health and Family Welfare (2011), AYUSH, Government of India, Ayurveda Pharmacopoeia of India, Vol VIII, Part I/9, 1st edition, The Controller of Publications Civil Lines, Delhi, 32

24- Ministry of Health and Family Welfare (2011) , AYUSH, Government of India, Ayurveda Pharmacopoeia of India, Vol VIII, Part I/45, 1st edition, The Controller of Publications Civil Lines, Delhi, 143

25- Susruta Samhitha of Susruta (2013), Sutrasthana 45/51, English translation by P V Sharma, Vol I, Chaukhambha Vishvabharati, Varanasi, 426

26- Compendium of Medicinal Plants a Sri Lankan Study (2001), Vol. I, The Department of Ayurveda, Sri Lanka

27- Compendium of Medicinal Plants a Sri Lankan Study (2002), Vol. II, The Department of Ayurveda, Sri Lanka

28- Compendium of Medicinal Plants a Sri Lankan Study (2003), Vol. III, The Department of Ayurveda, Sri Lanka

29-

Compendium of Medicinal Plants a Sri Lankan Study (2004), Vol. IV, The Department of Ayurveda, Sri Lanka.