



AN ATTEMPT TO DECODE KSHARA PRAYOGA WITH SHODHANA IN STHOULYA VIS A VIS OBESITY-A CASE STUDY

Dr. P. Meghana Herale^{*1}, Dr. Abdul Khader² and Dr. Manjunath Adiga³

¹PG Scholar, Department of Kayachikitsa, Sri Kalabyraveswara Swamy Ayurvedic Medical College Hospital and Research Centre, Bangalore.

²Professor, Department of Kayachikitsa, Sri Kalabyraveswara Swamy Ayurvedic Medical College Hospital and Research Centre, Bangalore.

³Professor, Department of Kayachikitsa, Sri Kalabyraveswara Swamy Ayurvedic Medical College Hospital and Research Centre, Bangalore.



***Corresponding Author: Dr. P. Meghana Herale**

PG Scholar, Department of Kayachikitsa, Sri Kalabyraveswara Swamy Ayurvedic Medical College Hospital and Research Centre, Bangalore.

Article Received on 31/05/2025

Article Revised on 20/06/2025

Article Accepted on 10/07/2025

ABSTRACT

Obesity is a lifestyle disorder which is one of the commonest condition among developed and developing countries. It is a condition of caloric imbalance that results from an excess intake of calories that exceeds their consumption by the body. Obesity is often associated with a higher risk of mortality and morbidity as it is an important risk factor of Non Communicable diseases like Type II Diabetes Mellitus, Hypertension, Cardio Vascular Disorders, Osteoarthritis, PCOD as well as psychological disturbances like Stress, Anxiety and Depression. Sthoulya being a *Bahudoshaja Vyadhi Shodhana* is necessary along with *Rukshana Chikitsa* to treat the root cause.

Aims and Objectives: To assess the efficacy of *Udwartana*, *Virechana* followed by oral administration of *Erandapatra Kshara*.

Methods:

- *Udwartana* with *Triphala* and *Kolakulathadi Churna* for 7 days
- *Snehapana* with *GugguluTiktaka Gritha* and *Sukumara Gritha* for 4 days
- *Virechana* with *Trivruth Avalehya*
- Oral administration of *Erandapatra Kshara* along with *Manda* for 30 days

Results: Management of *Sthoulya* with *Udwartana*, *Virechana* followed by *Shamanoushadhi* was effective in all qualitative and quantitative data. **Discussion:** The drug possessing *Ushna*, *Teekshna*, *Pachana*, *Lekhana*, *Kapha-Ama-Medohara gunas* counteracts *Sthoulya*. **Conclusion:**

KEYWORDS: *Erandapatra Kshara*, *Virechana*, *Sthoulya*, Obesity.

INTRODUCTION

Sthoulya is one among the major diseases that falls under the category of *Santarpanajanya Vyadhi*^[1] wherein *Srotorodha* and *Agnivaishamyata* occurs. Due to *Avyayama*, *Diwaswapna*, *Adhyashana*, Consumption of *Sleshmala Ahara* there is *Kapha Vata Prakopa* and *Medovridhi* as *Dushita Dosha* and *Dushya*.

Acharya Charaka has mentioned *Ruksha Udwartana* as one of the principles of treatment for *Sthoulya*.^[2] It is *Bahudoshaja Vyadhi*^[3] hence *Shodhana* is advocated. *Virechana Karma* is one of the treatment modalities for treating *Santarpanajanya Vikaras*.^[4] It clears the *Sroto-Avarodha* and normalizes the *Agni*. *Acharya Bhavaprakasha* has mentioned the administration of *Erandapatra Kshara* in *Sthoulyadhikara*.^[5] *Kshara* as

such has *Ushna*, *Tikshna*, *Pachana*, *Lekhana*, *Kapha-Ama-Medohara gunas*.^[6] *Kshara* along with specific *Anupana* having *Vatanulomana*, *Srotomrudakara gunas* corrects the digestive health along with lifestyle modification.

CASE STUDY

A 29 yr old male patient, business by occupation complained of gradual weight gain of 10 kgs in the last 8 months associated with increased hunger and thirst, heaviness of body, disturbed sleep, fatigue, generalized weakness and bloating of abdomen. Pt is a K/C/O of Hypothyroidism since 3 months with TSH-6.42 IU/ml but is not on any supplements for the same. There is no family history of obesity. Based on his complaints and

considering BMI of 32.2 pt was diagnosed as Class I Obesity.

MATERIALS AND METHODS

A Clinical Case Study with *Atarpana Chiktsa* with *Udwartana*, *Virechana* and *Shamanoushadhi*.

Erandapatra Kshara -Acharya Bhavaprakasha has mentioned the use of *Erandapatra Kshara* in *Sthoulyadhikara*.

Ingredients, Preparation and Mode of Administration

Erandapatra Kshara-250mg

Bharjitha Hingu-150mg

Manda-Q.S

Method of Preparation

Erandapatra Kshara

- The *erandapatra* is dried under the hot sun until it is completely dry. The dried leaves are taken in a wide mouthed big iron vessel and ignited in an open place.
- After it is completely burnt, the ash is allowed to cool down on its own. This is filtered through a sieve to get rid of unburnt woody part.
- The obtained ash filtrate is now dissolved in 6 parts of water. The mixture is stirred well and kept undisturbed overnight. Next morning the 'supernatant clear liquid' is carefully decanted into a separate clean stainless-steel vessel.
- It is now filtered through a clean cotton cloth for 21times. The final filtrate is taken in an open large iron vessel and heated over moderate fire with constant stirring. This should be continued till all the water content gets evaporated, leaving a solid white substance which is collected in air tight bottle.

Manda Kalpana: Manda is prepared by boiling 1 part of 'tandula' with 14 parts of water in a clean stain less steel vessel over mild fire until all the rice particles are properly cooked. Later the liquid part is filtered and the liquid filtrate is taken as 'Manda'.

Mode of Administration

Erandapatra Kshara -250mg+ *Hingu*-150mg along with *Manda* (quantity sufficient) once daily in the morning in empty stomach for 30 days.

Pathya-Apathya Ahara -Vihara during the course of the treatment is as follows-

Ahara-To avoid sweets, curd, deep fried food, urad dal, bakery foods, packed foods, food made out of Maida.

- Use of buttermilk added with *Shunti* in the afternoon
- Use of hot water when thirsty
- Use of barley in the form of *Ganji*/processed with wheat flour to prepare Roti.
- Intake of more of Boiled vegetables.

Vihara-Walking for at least half an hour a day

Dinner to be finished by 7:30pm

To avoid *Diwaswapna*(day sleep) completely.

Examination

General Examination

- Built-Endomorphic
- Nourishment-Well nourished
- BP-110/70 mm Hg
- Pulse-78bpm
- Pallor- Absent
- Icterus-Absent
- Cyanosis- Absent
- Clubbing- Absent
- Lymphadenopathy- Absent
- Edema- Absent

Anthropometry

- ❖ Height-170 cm
- ❖ Weight-100.8 kg
- ❖ BMI-34.6
- ❖ Chest Circumference-92 cm
- ❖ Waist Circumference-104 cm
- ❖ Hip Circumference-115 cm
- ❖ W-H Ratio-0.90
- ❖ Right Mid Arm Circumference-42 cm
- ❖ Left Mid Arm Circumference-41 cm
- ❖ Right Mid Thigh Circumference-61 cm
- ❖ Left Mid Thigh Circumference-64 cm

Systemic Examination

RS-B/L NVBS heard

CVS-S1, S2 heard

P/A-Soft, NAD

CNS-Well oriented, conscious to time, place and person

Investigational History

Hb-15.3 g/dl

FBS-80.1mg/dl

PPBS-116.5mg/dl

Blood Urea-23.7mg/dl

BUN-11 mg/dl

S.Creatinine-1.1 mg/dl

S.Uric Acid-7.8 mg/dl

HbA1C-5.9%

Mean Blood Glucose-120.9 mg/dl

Lipid Profile

Total Cholesterol-233.6 mg/dl

Triglycerides-198 mg/dl

HDL Cholesterol-36.9 mg/dl

LDL Cholesterol-157.1 mg/dl

VLDL-39.6mg/dl

TC/HDL-6.3

LDL/HDL-4.3

Dashavidha Rogi Pariksha

- *Prakruti*-Vata-Kapha
- *Vikruthi*-Kapha
- *Sara*-Madhyama
- *Samhanana*-Madhyama
- *Pramana*-Madhyama
- *Sathmya*- Madhyama
- *Satva*- Madhyama

- AharaShakthi-
- Abyavarana Shakti- Madhyama
- Jarana Shakti- Madhyama
- VyayamaShakthi- Madhyama
- Vaya- Madhyama

AshtaSthana Pariksha

- Nadi-Prakruta
- Mala- Prakruta
- Mutra- Prakruta
- Jihwa- Lipta
- Shabda- Prakruta
- Sparsha-Anushnasheeta
- Drik- Prakruta
- Akriti-Sthoola

Nidana Panchaka**Nidana**

- ❖ Ahara: Guru snigdha, Madhura, Mamsala ahara
- ❖ Vihara: Diwaswapna, Avyayama, Sedentary lifestyle
- ❖ Purvarupa-Gurugatrata
- ❖ Rupa-Guru gatrata, Kshuth atimatra, Atipipasa, Anutsaha
- ❖ Upashaya-Vyayama, Apatarpana ahara
- ❖ Anupashaya- Santarpanajanya Ahara, Avyayama, Diwaswapna

Samprapti**Nidana**

Medodhatu Vriddhi

Srotoavarodha by Medas



Vata is confined to Koshta and causes Jatharagni Vriddhi



Causes Lakshanas like Atikshuth, Atipipasa, Sthoolata, Aalasya



Sthoulya

Samprapti Ghataka

- ❖ Dosha-Kledaka kapha, Pachaka pitta, Samana vata, Vyana vata
- ❖ Dushya-Rasa dhatu, Mamsa dhatu, Meda dhatu
- ❖ Srotas-Rasavaha, Mamsavaha, Medovaha, Swedavaha
- ❖ Srotodushti-Sanga, Vimargagamana
- ❖ Agni-Jatharagni, Medodhatwagni
- ❖ Ama-Jatharagnimandya janita, Dhatwagnimandya
- ❖ Udbhava Sthana-Amashaya
- ❖ Sanchara Sthana-Rasayini
- ❖ Vyakta Sthana-Sarvanga/Udara/Sphik/Sthana
- ❖ Adhishtana- Medovaha srotas
- ❖ Rogamarga-Madhyama
- ❖ Sadhya Asadhyata- Kricchra sadhya

Treatment Plan

Days	Treatment	Observations
1-10 th day	Udwartana with Triphala, Yava, Kolakulaththadi Churna	Weight loss of 2 kgs
11-14 th day	Snehapana with GTG+Sukumara Ghrita	Weight loss of 1 kg
15-17 th day	Sarvanga Abhanga with Asanadi Taila	No change in weight
18 th day	Virechana Karma-Trivruth Lehya-70g Anupana:Triphala Kwatha-100ml	Weight loss of 2 kgs
19-22 nd day	Peyadi Samsarjana Krama	
23-53 rd day	Erandapatra Kshara(250mg)+Bharjita Hingu(150mg) with Manda(Q.S) in empty stomach in morning for consecutive 30 days.	Weight loss of 3 kgs

During the treatment schedule, pt was asked to do Nidana Parivarjana and follow Pathya Ahara-Vihara.

RESULTS

- There was remarkable reductions in symptoms like Gurugatrata, Alpa nidra, Utsahahani. There was mild reduction in other symptoms like Atikshuth and Atipipasa.
- There were significant positive changes in Lipid profile and also weight loss of 8 kgs in 52 days.
- The TSH levels had reduced from 6.42 mg/dl to 4.38 IU/ml.

Anthropometry changes

	BT	After Virechana	After Kshara
Right Mid Arm	42cm	40cm	39cm
Left Mid Arm	41cm	39cm	38cm
Right Mid Thigh	61cm	60cm	60cm
Left Mid Thigh	64cm	61cm	60cm

Chest Circumference-	92cm	90cm	89cm
Waist Circumference	104cm	104cm	103cm
Hip Circumference	115cm	115cm	114cm
Weight	100.8kg	96kg	93kg

Changes in Lipid Profile

Parameters	BT	AT
Total Cholesterol	233.6 mg/dl	202 mg/dl
Triglycerides	198 mg/dl	136 mg/dl
HDL Cholesterol	36.9 mg/dl	42 mg/dl
LDL Cholesterol	157.1 mg/dl	135 mg/dl
VLDL	39.6 mg/dl	27 mg/dl
LDL/HDL	4.3	3.2

Changes in Signs and Symptoms

	BT	After Virechana	AT
Atikshuth	+++	++	+
Atipipasa	++	++	-
Gurugatrata	+++	++	-
Alpanidrata	+++	++	+
Utsahahani	++	++	+
Dourbalya	++	++	+

+++ =Severe

++ =Moderate

+ =Mild

- =Absent

DISCUSSION

Udwartana

Udwartana is one among the *Bahir Parimarjana Chikitsa* used in the form of *Bahya Rookshana* which brings about *Pravilapana* and *Vimlapana* and increases *Agni*. Udwartana does *Kaphahara*, *Medovilayana*, *Medoshoshana*, *Vatahara*, *Siramukha vivikthatva*, *tandrahara*, *Gouravahara*, and *Sthirakaranam Anganam*.^[7] It is indicated in *Mamsala*, *Medura*, *Bhuri Sleshma* as *Snehapurva Rukshana* which does *paachana* of *dushitha kapha dosha*, *meda dhatu* and removes *Srotorodha*. To enhance the *Medovilayana Karma*, *Katu-Tikta rasa*, *Ushna veerya*, *Laghu*, *Ruksha*, *Teekshna dravyas* are to be used, due to which *Twakstha Agni* will be stimulated leading to Absorption of the drug and further does *Pravilapana of Medodhatu*. *Triphala Churna* is *Tridosahara*, *Ruksha* and *Kolakulathadi Churna* is *Vata-Kaphahara*. In the course of Udwartana patient noticed *Laghuta*, *Agni vriddhi*.

Virechana Karma

In *Panchakarma*, *Virechana Karma* is considered as the second *Pradhana Karma* through which *Pitta* and *Kapha* associated with *Pitta* from *Pitta Sthana* as well as *Kapha Sthana* can be eliminated. It does *Tridosahara*. *Shodhananga Snehapana* is most important *Purvakarma* before *Vamana* and *Virechana*. The properties of *Sneha* are opposite to *Rooksha Guna* which helps bringing the *Doshas* from *Shakha* to *Koshtha* by *Vridhhi*(excessive increase of *Dosha*), *Vishyanada* (Liquification of *Dosha*), *Paka* (digestion of *Dosha*), *Srothomukha Vishodhana*(clearness in channels) and *Vayoshcha*

Nigraha(controlling of *Vata*). by *Swedana* process brings the *Doshas* to *Koshtha*. Once the *Dosha* reaches the *Koshtha* it should be expelled through *Virechana*. *Virechana* drugs have *Ushna*, *Teekshna*, *Vyavayi* and *Vikasi Gunas*. The *Ushna guna* may help in increasing the quantum of *Agni*. Due to *Teekshna guna* drug will be able to do remove the *Sanghata* i.e., Disintegrates the *doshas*. Due to *Vyavayi guna* medicine can spread in the whole body prior to its digestion. On virtue of its *Vikasi guna* the drug can burn various *Dhatus* and can compel the *Doshas* which are residing in it to come out. *Trivrit* contains *Tikta-Katu Rasa*, *Laghu*, *Ushna* and *Teekshna Gunas*, it has effect on *Pitta* and *Kaphadosha*, *Prabhava* of *Rechana*. After *Virechana*, a special diet regimen is to be followed to increase *Agni* and to provide nourishment to the patient. The importance of *Samsarjana Karma* is to increase the strength of weakened *Agni* and body after *Samshodhana Karma*. By *Virechana Karma*, all *Doshas* are alleviated so that weight of the body automatically decreases which leads to *Sthoulyanashana*. By *Shodhana*, *doshas* will be detached from their roots, by these chances of reoccurrences of diseases is less.

Shamanoushadhi

Sthoulya is a *Santarpanajanya Vyadhi* with *Kapha* and *Meda dhatu pradhana* in nature, to counteract act the same the drugs used should be *Ruksha Pradhana*. Reducing *Baddha medas* which is accumulated for a long time is not an easy task just by administration of *shamanoushadhi*.

According to Acharya Sushruta, the person should make use of *Shilajathu*, *Guggulu*, *Triphala*, *Loharaja*, *Madhu*, *Yava*, *Rasanjana*.^[8] *Kshara* has *Ushna*, *Tikshna*, *Pachana*, *Lekhana*, *Kapha*, *Ama* and *Medohara* Gunas. *Kshara* does *Tridoshaghna*, is *Agneya gunayukta*, does *Vilayana*, *Shoshana*. It should not be *Ati teekshna*, *ati mridu*, *ati Shukla*, and *ati picchila* and should be *Slakshna*, *Abishyandhi*, *soumyatva* and *shigrakari*. *Erandapatra* is *Vata-Kaphahara* and has *Madhura*, *Katu*, *Kashaya rasa*, *Teekshna*, *Sukshma* and *Snigdha guna*, *Ushna Veerya* and *Madhura Vipaka*. *Hingu* has *Vata Kaphahara*, has *Laghu Teekshna* gunas, digests the *amasadushta annarasa* and is *Sreshtha* in *Vata shamana*. *Manda* has *Deepana*, *vatanulomana*, *Srotomrudukara* gunas and is indicated in *Langhita* and *Virikta*. Both *Kshara* and *Hingu* are *Ushna* and *Teekshna* which does *Vilayana* of accumulated *Kapha*. Due to the *Sukshma* guna of *Eranda*, it clears the *margavarodha*. According to *Rasa Tarangini*, *Yava Kshara* has *Dipana*, *Pachana*, *Kapha-Vatahara* Gunas.

The present study deals with typical obesity. Here *Udwartana*, *Shodhananga Snehapana*, *Virechana* and *Erandapatra Kshara* as *Shamanoushadhi* was found effective. *Udwartana* does *Kaphahara*, *Medovilayana* and is indicated in *Mamsala*, *Medura*, *Bhuri Sleshma* as *Snehapurva Rukshana*, removes *Srotorodha* and brings about *Pravilapana* and *Vimlapana* and increases *Agni*. (*Bhrajaka pitta*) To enhance the *Medovilayana Karma*, *Katu -Tikta rasa*, *Ushna veerya*, *Laghu Ruksha Teekshna dravyas* are to be used, due to which *Twakstha Agni* will be stimulated leading to Absorption of the drug and further does *Pravilapana* of *Medodhatu*. *Triphala Churna* is *Tridoshahara*, *Ruksha* and *Kolakulatthadi Churna* is *Vata-Kaphahara*.

Shodhananga Snehapana is the most important purvakarma for *Vamana* and *Virechana*. According to Acharya Charaka, *Sneha gunas* which are opposite to *Ruksha gunas* help in bringing doshas from *Shakha* to *Koshta* by *Vridhhi*, *Vishyanadana*, *Paka*, *Srotomukha Vishodhana* and *Vayoshcha Nigraha*. Once the doshas reaches the *koshta*, it should be expelled either through *Vamana* or *Virechana*. *Virechana dravyas* have *Ushna*, *Teekshna*, *Vyavayi*, *Vikasi gunas* which clears the *Sroto-Avarodha* and does *Agni-deepana*. *Erandapatra Kshara* does *Kapha -Vatahara*, *Lekhana*, *Pachana*, *Medohara* when taken with *Manda* corrects the *Agni* and helps in effective weight management. *Kshara* is one among the *tridravys* which are prohibited for long duration as it causes complications.^[9] Almost all factors in this Universe have a general principle. On the other hand, certain factors have no idea about the principles. These acts are against the rule, and the entire universe accepts this system, an exception to the general rule called *Utsarga Apavada Nyaya*. But Acharya Chakrapani clarifies that excessive usage of *Pippalyadi dravyas* in *Annasamskarana* is prohibited not the *swatantra prayoga* as *Aushadha*.^[10] Hence *Kshara* was administered in a less dose for a limited period of time.

Role of Rasayana in Sthoulya: *Rasayanas* like *Guggulu*, *Triphala*, *Guduchi* are effective in the management of *Sthoulya*.

Guggulu- *Guggulusterone*, the bioactive constituent of *Guggulu* is found to be a key transcriptional regulator for the maintenance for the maintenance of cholesterol and bile acid homeostasis in the body system. It has anti-inflammatory action which is documented as *Shothaghna*. Studies have proved that *Guggulu* shows potent inhibitory activity against the production of nitric oxide and therapeutically beneficial to diseases related to oxidative stress like Obesity. It consists of flavonoids, triterpenoids which shows anti - inflammatory action. It does *Lekhana* of *Meda dhatu* and is *Tridoshahara*.

Triphala- There is a connection between the modification of gut microbiota in the colon and the progressive increase in body weight. It has been observed that the human gut microbiome can be modified with the help of polyphenols in *Triphala* and promotes the growth of good bacteria and *Lactobacillus* and also inhibits the growth of pathogenic gut microorganisms. Studies have showed that *Triphala* has antioxidant, anti- inflammatory, immunomodulatory activities. It possesses *Laghu*, *Ruksha gunas* which acts on *Kapha* and *Meda* and does *Lekhana*, *Medohara* and *Vatanulomana* which is useful in managing *Sthoulya*.

Guduchi -It is often included in various formulations for *Sthoulya* such as *Guduchyadi yoga*, *Guduchi bhadradi Kashaya* due to its *Kapha-Medohara*, *Kledahara*, *Rasayana* properties. It encounters *Kapha-Vata* due to its *Tikta-Kashaya rasa* and *Ushna virya* which does *Medo-Kleda Shoshana* and *Vilayana*. In vitro studies conducted on methanolic extracts of *Tinospora cordifolia* stems have demonstrated inhibition of lipid peroxidation, the elevation of glutathione levels, and radical scavenging properties which helps in managing Obesity.

CONCLUSION

Sthoulya is one among the lifestyle disorders which is more prevalent in young and middle aged population of India. This is caused due to *Atisantarpana*. Based on *Dosha bahulyata*, suitable *Shodhana* can be adopted. Based on the signs and symptoms, *Sthoulya* was treated with *Sarvanga Udwartana*, *Virechana* followed by *Nidana Parivarjana* in the form of *Ahara* and *Vihara* along with *Erandapatra Kshara* showed remarkable changes in reducing weight of the patient. To prevent relapse patient was advised to follow *Pathya Ahara* and *Vihara*.

REFERENCES

1. Agnivesha, Charaka Samhita, Ayurveda Deepika Commentary of Chakrapanidatta, Edited by; Vaidya Yadavji Trikamji Acharya, Choukambha Orientalia Varanasi, Reprint, 2015; Sutra Sthana, Chapter 23, Verse-6, 122.

2. Agnivesha, Charaka Samhita, Ayurveda Deepika Commentary of Chakrapanidatta, Edited by; Vaidya Yadavji Trikamji Acharya, Choukambha Orientalia Varanasi, Reprint, 2015; Sutra Sthana, Chapter 21, Verse-20, 117.
3. Agnivesha, Charaka Samhita, Ayurveda Deepika Commentary of Chakrapanidatta, Edited by; Vaidya Yadavji Trikamji Acharya, Choukambha Orientalia Varanasi, Reprint, 2015; Sutra Sthana, Chapter 16, Verse-13-16, 97.
4. Agnivesha, Charaka Samhita, Ayurveda Deepika Commentary of Chakrapanidatta, Edited by; Vaidya Yadavji Trikamji Acharya, Choukambha Orientalia Varanasi, Reprint-2015, Sutra Sthana, Chapter 23, Verse-8, 122.
5. Bhavamishra, Bhavaprakasha, Vidhyothini Hindi tika, by Bhishagratna Shri Brahmashankara Mishra Shastry, Dwitayabhaga, Varanasi, Choukambha Samskrita Samsthana, 2000; B.P 39/21: 412.
6. Sushruta, Sushruta Samhita, NibandhaSamgraha Commentary of Sri Dalhanacharya and Nyaya Chandrika Panjika on Nidanasthana Commentary of Sri Gayadasacharya, by; Vaidya Yadavji Trikamji Acharya, Choukambha Surabharati Prakashan, Varanasi, reprint-2008, Sutra Sthana, Chapter-11, Verse-5, 45.
7. Sushruta, Sushruta Samhita, NibandhaSamgraha Commentary of Sri Dalhanacharya and Nyaya Chandrika Panjika on Chikitsasthana Commentary of Sri Gayadasacharya, by; Vaidya Yadavji Trikamji Acharya, Choukambha Surabharati Prakashan, Varanasi, reprint-2008, Chikitsa sthana, Chapter-24, Verse-51-52, 489.
8. Sushruta, Sushruta Samhita, NibandhaSamgraha Commentary of Sri Dalhanacharya and Nyaya Chandrika Panjika on Nidanasthana Commentary of Sri Gayadasacharya, by; Vaidya Yadavji Trikamji Acharya, Choukambha Surabharati Prakashan, Varanasi, reprint-2008, Sutra Sthana, Chapter-15, Verse-32, 73.
9. Agnivesha, Charaka Samhita, Ayurveda Deepika Commentary of Chakrapanidatta, Edited by; Vaidya Yadavji Trikamji Acharya, Choukambha Orientalia Varanasi, Reprint-2015, Vimana Sthana, Chapter 1, Verse-15, 234.
10. Agnivesha, Charaka Samhita, Ayurveda Deepika Commentary of Chakrapanidatta, Edited by; Vaidya Yadavji Trikamji Acharya, Choukambha Orientalia Varanasi, Reprint-2015, Vimana Sthana, Chapter 1, Verse-16, 234.