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ROLE OF CHAKRA TAILA SHIRODHARA IN CASES OF ANIDRA

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ABSTRACT

Nidra is a reversible state of unconsciousness occurring naturally and distinguishable from unconsciousness due to organic cause by the fact that the person is easily arousable. Hence *Nidra* is opposite to wakefulness physiologically occurring for a certain length of time which generally extends for 6-8 hours in normal adults. A condition where the sufferer complains of loss *of Nidra* (sleep) during its natural time *i.e. Ratri* (night) is called *Anidra.* It is a pathological condition. *Nidra* is one of the *Upastambhas* of life without which no human being can aspire to remain healthy. *Anidra* has been classified under *Vata Nanatmaj Vyadhi. Vata* plays a key role in producing *Anidra. Vata* being *Satva Rajo Guna Pradhana* and *Laghu,* is quite opposite to the factors inducing sleep *e.g. Kapha* which is *Guru, Manda* and *Tamoguna Pradhana.* The *Chikitsa sutra of Anidra* carries three main measures, *Shamana* of the vitiated *Vata,* enhancing the *Kapha* and putting *Manah* to peace. *Vata Nashana* procedures include *Snehana* in the form of *Abhyanga, Tarpan, Dhara etc. Kapha* is enhanced by using *Vrinhana, Balya, Rasayana Ahara* and *Vihara e.g. Mamsarasa, Mahish Dugdha etc. Manasik Santap* can be relieved by using measures for mental relaxation *e.g. Shauch, Santosh, Ishwar Pranidhana.* Eleven months of intensive trial and study yielded encouraging results. *Chakra taila* used for *Shirodhara* promotes the action *Snehan, Tarpon, Nadibalya Vrishya Medhya* and *Rasayana* thus *Vata pittaghna* in nature and improves the functioning of *Uttamanga* and *Pranayatan.* The therapeutic approach applied in the clinical trial establishes a homeostasis between the vitiated *Vata (Prana Vayu)* and depleted *Kapha (Tarpak Shleshma)* at the site of *Nadisthana Murdha.* This phenomenon lies beneath its *Nidra* Janana

Prabhava. There were no adverse effects as reported by the patients and drug was tolerated quite well. None of the patients reported addiction or dependence and there was no craving after the drug was stopped.

KEYWORDS: Anidra, Chakra taila, Insomnia, Shirodhara.

INTRODUCTION

Nidra is a reversible state of unconsciousness occurring naturally and distinguishable from unconsciousness due to organic cause by the fact that the person is easily arousals. Hence *Nidra* is opposite to wakefulness physiologically occurring for a certain length of time which generally extends for 6-8 hours in normal adults.

A condition where the sufferer complains of loss *of Nidra* (sleep) during its natural time *i.e. Ratri* (night) is called *Anidra.* It is a pathological condition. *Naidanik bhavas* contributing to the condition *of Anidra* can broadly be listed under *Sharirik* (somatic), *Manas* (psychological) and *Agantuja* in origin. These result in accumulation of concerning *Doshas (Rajas, Vata* and *Pitta)* and simultaneous *Tamah* and *Kapha Kshaya* in *Monovaha Srotasas.* Despite the absence of specific *Samprapti* Ayurvedic texts clearly implicate vitiation of *Vata and Pitta doshas* and derangement of *Manovaha Srotasas* in pathogenesis *of Anidra. Dalhana* cleared the picture further; *Vata Dosha Vridhi* and *Kapha Kshaya* occur simultaneously in the body. There can be no *Nidra* without *Kapha.* Such people experience *Vaikariki* type of *Nidra* where a person does not get *Nidra* (sleep) at all *(Anidra)* and the little *Nidra* (sleep) he manages is abnormal.[1]

True to Ayurvedic spirit, management *of Anidra* in various Ayurvedic samhitas is multidimensional. Various modes applied are *Ahara* (diet), *Vihara* (behavioral/physical daily activities); *Aushadhi* (drugs), procedures (therapies) *etc.*

Anidra (insomnia) is a common sleep complaint. It is a perception that sleep quality is inadequate or non-restorative, despite the adequate opportunity to sleep. It is also associated with a variety of medical, psychiatric and sleep disorders.[2] A comprehensive history and physical examination are essential to determine the etiology of *Anidra* (insomnia).

The complaint *of Anidra* (insomnia) encompasses many sleep problems. These include: Difficulty in falling asleep, sleeping too lightly with multiple spontaneous awakening, inability to fall back asleep. On the basis of duration *Anidra* (insomnia) is divided into three

types: Transient (Lasts upto one week), Short term (Lasts 1-6 months), Chronic (Lasting more than 6 months). A world health organization study conducted in 15 centers found a prevalence of approximately 27% for the complaint "difficulty in sleeping".[3]

Various therapies and preparations have been advocated in Ayurvedic Samhitas to manage the cases *of Anidra.* In present drug trial two drug regimes was decided upon for clinical study to explore the extent of usefulness of this regime in cases *of Anidra.*

Kanamula Churna mentioned in *Anidra* was selected for oral therapy[4] and *Chakra taila* was selected for *Shirodhara.*[5]

In Ayurvedic literature *'taila'* has been advocated as the drug of choice for *Vatarogas.* Being *'Sukshma'* it is easily absorbed and being *Vyavayi* it is quickly absorbed and metabolised later. After *Samskara* it is capable of curing all the diseases. Considering the conceptual principles, mode of application and maintaining the *Vridhi* and *Kshaya* of *dosha* and *dhatu,* it was decided to prescribe *Chakra taila* in a modified manner as *Shirodhara* in present series of cases *of Anidra.*

MATERIAL AND METHODS

Plan of Study

For the proposed clinical study, the patients were selected from the OPD and IPD of the State Ayurvedic College and Hospital, Lucknow. Referred patients from other clinics and hospitals were also registered.

Selection and diagnosis of cases

I- History of the patient (Medical/Social/Personal)

Special attention was paid to the quality and quantity of physical and mental work he/she performed and thereby need of relaxation (amount of time) needed to regain the normal energetic levels. Daily sleep routine *i.e.* time of going to bed, number of sleep hours, keeping up late, short duration of sound sleep was mapped out. Environmental factors *e.g.* noisy areas of residence, uncomfortable bed were inquired about.

Emotional stress due to loss of a close associate, a new job, a deadline to fulfill, was also given equal attention. All these facts were assorted under the classical format given in the Ayurvedic texts consisting of predisposing factors for *Anidra.*

Kala

Time of going to bed and waking up, also multiple awakenings and the afternoon siesta.

Prakriti

Constitutional parameters (Vataja and Pittaja).

Vikriti

Increase of Vata and Pitta doshas and decrease of Kapha.

Vikara

Any chronic illness e.g. hypertension, renal disease, painful conditions, hyperpyrexia etc.

Abhighata

History of trauma.

Manasika Santapa

History of stress, strain, anxiety, fears, worries, excitement etc.

Kshaya

Rasa Kshya - loss of weight to below the normal range or wasting.

Therapeutic history

History of drug intake, procedural complications of Vamana, Virechana, Nasya etc. and Upavasa (fasting).

II- Detailed Information about the Symptom Complex

Lakshanas **-** Patients were examined on the basis of a specific proforma especially prepared for the purpose. Classically mentioned *Lakshanas/upadravas* of *nidranasha* were used as the spectrum of clinical features to be sought in a patient *of Anidra.* They are as follows:

1) Jrimbha	5) *Shirogaurav*	9) *Bhrama*
2) *Angamarda*	6) *Akshigaurav*	10) *Apakti*
3)Tandra	7) *Jadya/Jadata*	11) *Vata Rogas*
4) *Shiroroga*	8) *Glani*	

III- Laboratory Investigations

To differentiate idiopathic *Anidra* from *Anidra* due to organic disease, laboratory investigations both routine and specific were advised, before registering the patients and after the completion of trial period. Also specific investigations to monitor the effects of the trial drug on the patients were advised at 15 days interval.

1) Complete haemogram: Hb%, TLC, DLC, ESR, Blood sugar: - Fasting & PP.
2) Routine urine (Routine & Microscopic) and stool examinations (Ova & cyst).
3) Fundoscopy.

Specific investigations advised if possible and as and when required are as follows:

(i) SGPT.
(ii) Serum creatinine.
(iii) Blood arterial gases.
(iv) Computerised axial tomography head.
(v) Polysomnography.

Inclusion Criteria

The patients having complaints of *Anidra* least three consecutive nights, resulting at least six symptoms (*Jrimbha, Angamarda, Tandra, Shiroroga, Shirogaurav, Akshigaurav, Jadya, Glani, Bhrama, Apakti & Vata Roga*) mentioned as *Upadravas* of *Nidranasha* by *Charak.*

Exclusion Criteria

Patients having prolonged practice of *Langhana* (fasting), *Abhighata janya rogas* (diseases due to traumatic injury), *Chirakari rogas* (chronic diseases *e.g. Tamaka shwasa, Hridroga, Mutraghata, Kampavata, Unmada, Ashthila Pratyashihila etc.)* and cases of drug dependence were not included in study.

Selection of Drug

Shirobhyanga with *Chakra taila* to counter *Shirorogas* and provides strength to the *Mastishka* and *Indriyas.*

In Ayurvedic literature *taila* has been advocated as the drug of choice for *Vatarogas.*[6] Being *'Sukshma'* it is easily absorbed and being *Vyavayi* is quickly assimilated and metabolized later.[7-9] After *Samksara* it is capable of curing all the diseases.[6,10]

Considering the conceptual principles, mode of application and maintaining the balance related to *Kshaya* of *dosha* and *dhatu* it was decided to prescribe *Chakra taila* in a modified manner as *Shirodhara* in present series of cases *of Anidra.*

Chakratail (Madhuyashti, Kshirvidan, Saral Kastha, Devadaru, Laghu Panchamula in equal part & Til taila) Shirodhara 750ml/day, 10 days consecutively and thrice in a period of 8 weeks with a gap of 10 days between two cycles (10+10+10+10+10+10).

METHOD OF TRIAL

For the purpose of study patients were randomly selected and all the patients were asked to stop all the previous medication if any. The total period of study was eight weeks.

Patient was administered *Shirodhara* with *Chakra taial.* The cases were assessed on weekly basis.

Shirodhara

The process in which medicated liquid (oil, milk, buttermilk) is poured in a continuous stream on the forehead in a specific rhythmic manner.

Apparatus

1. Dharaprapathi/Droni

It is a wooden bath/basin for the patient to lie on during the procedure of *Shirodhara.* It is 4 *hasta pramana* in length, 1 *hasta pramana* in breadth and should be surrounded by raised border. It has a slope of 1 *hasta pramana* from head end towards the foot end where a drain is built to remove the excess drippings. It is made from hard wood trees like *Plaksha, Udumbera, Gandhasara, Nyagrodha etc. (Dharakalpd).*

2. Dharapatram

It is a shallow vessel about 5-7 inches deep. It has a wide mouth and a curved bottom. It has a capacity of not less than 2 *prasthas.* It could be made of glass, gold, silver, earthen ware, porcelain or any of the woods recommended for the *Taila Droni.* A small hole about 1/2 inches in diameter is neatly made at the centre of the bottom of the vessel. An inverted small hard hemispherical hollow wooden cup having a corresponding hole in its bottom at the centre is placed over the hole in the *dharapatram.* This cup has ridged margin. A wick is passed through both the holes so as to allow free flow of the liquid. Small wooden wedge is tied to the inner end of the wick to secure it.

3. A band of cloth is tied around the forehead of the patient to check the oil from flowing into the patient's eyes.

Procedure

Shirodhara (also called *Shirasseka)* is the process in which medicated oil milk or buttermilk is poured in a continuous stream on the head, especially forehead in a specific manner *(Dharakalpd).*

The patient is made to lie down in the basin specially prepared for the purpose. Patient is anointed with disease specific medicated oils prior to starting *Shirodhara.* Patient's head is kept in an elevated position. Two attendants are needed for the process of *Shirodhara.* One attendant attends to the refilling of the *dharapatram,* while the other supports it over the patient's forehead. A band of cloth is twisted and tied around the forehead of the patient just above the eye level so as to avoid pouring oil into the eyes.

The procedure is started by pouring the required oil into the *Dharapatram* and adjusting the *Varthi* to form a continuous *Dhara* which should be carefully maintained throughout the procedure. The *Dharapatra* is refilled continuously with the drippings from the basin. Generally the treatment is given in *Purvanh* (earlier part of the day) or morning preferably between 7-10 AM. The treatment is carried daily for a period of 7-14 days according to the ailment the patient is suffering from. The *Pathya Ahara* and *Vihara* is observed during the treatment and after for an equal period of time.

ASSESSMENT OF RESULT

The result of present study was assessed under following categories:

Arogya

Complete recovery: Patients returning to satisfactory sleep with proper circadian rhythms, without any *Lakshana/Upadrava.*

Kinchit Arogya

Improved - obvious improvement in onset, maintenance rhythm and finally satisfaction from sleep, with minimum *Lakshna/Upadrava.*

Anarogya

No improvement in symptoms.

Roga Vriddhi

Increase in intensity and/or frequency of the symptoms.

Results of study were assessed clinically by changes in symptoms and complaints.

Follow Up

The patients were assessed in follow up care every 15 days as long as possible.

OBSERVATIONS

Based on 20 established cases of insomnia interesting observations have come forth.

Incidence of the disease in different age groups revealed that insomnia is most common in the age group 20-30 years (6, 30%). The age group 41-50 years (5, 25%) is the next most prone to develop *Anidra* (insomnia). Males are more prone to develop *Anidra* (insomnia) (12, 60%) than females (8, 40%). All the females who registered for the study were housewives so statistically *Anidra* was found more commonly in housewives (8, 40%). Majority of the registered patients were Hindus (19, 95%) so statistically in this set of patients, Hindus were predominant. Incidence of *Anidra* was found to be maximum (14, 70%) among vegetarians. Married people were found to be overwhelmingly prone (15, 75%) to *Anidra.* Majority of the registered patients (9, 45%) were addicted to tea. *Anidra* was found to be more common in educated people (18, 90%). People living in congested surroundings were found to be more prone to *Anidra* (10, 50%). People with no daily exercise were more prone to suffer from *Anidra* (15, 75%). People with *Vata-pittaja* and *Rajas Prakriti* were found to suffer more from *Anidra* (15, 75%). Those with medium appetite were more prone to *Anidra* (9, 45%) while people with poor appetite were not for behind (6, 30%).

Clinical symptomatology as described in *Ayurveda* was found to be present in all the patients 100% in various combinations. Of the eleven symptoms four namely *Jrimbha*, *Angmarda, Shirogaurav* and *Akshigaurava* were found in all the patients (20, 100%). *Shiroroga* was found in (19, 95%). *Tandra, Apakti*, *Jadya, Bhrama, Vatarogas* and *Glani* were found in 16 (80%), 15 (75), 12 (60%), 11 (55%), 5 (25%), 3 (15%) respectively. Considering the sleep hygiene, levels majority of the patients showed good sleep hygiene. Among the patients, 19 (95%) had no recent change in the sleep schedule, 11 (55%) patients had inadequate bed comfort. Majority of patients, 16 (80%) did not take any day time naps. Snoring was absent in 17 (85%). Of the 20 patients registered 11 (55%) did not use bed for any other purpose.

None of the registered patients witnessed any apneoas or gasping during sleep. The number of patients with rest as a pre-bed time activity was maximum 13 (65%). Hence sleep hygiene was at optimum levels in majority patients registered for *Anidra.*

Majority of the people kept lying in bed when unable to sleep 12 (60%). Majority of patients had chronic insomnia (14, 70%). Of the 8 female patients registered, 4 (50%) were menopausal. *Manah santap* was present in all the cases of *Anidra.* Majority of the patients had social marital - and work related stress (6, 30%).

RESULTS

Considering symptomatology the general condition of majority of patients 20 (100%) patients had a fair general condition prior to the treatment and none of the patients had a good general condition. After the treatment all the patients 20 (100%) improved to the good category.

Majority of the patients 17 (85%) had both onset and maintenance *Anidra* (insomnia). This improved considerably in all the patients 20 (100%) fell under none category *i.e.* none of the patients had any type *of Anidra* after treatment.

For an overwhelming all the patients 20 (100%), no procedure succeeded in bringing sleep before the treatment. After the treatment 17 (85%) patients did not require any procedure to fall asleep after the treatment, 3 patients (15%) still required meditation *etc.*

There was no satisfaction from sleep in all 20 (100%) patients prior to the treatment. Post-treatment it improved to reach adequate levels in all 20 (100%) patients.

Variable	Before Treatment (Mean ± SD)	After Treatment (Mean ± SD)	Change after Treatment (Mean ± SD)	't'	Y
Grading Day time effects	7.95±1.23	0.15±0.68	(-)7.80±1.61	21.68	<0.001
Duration of Onset	2.44±0.69	0.36±0.27	(-)2.08±0.67	13.76	<0.001
Duration of Sleep (in hrs)	3.70±0.47	6.75±0.55	3.05±0.51	32.76	<0.001
Number of Nocturnal awakenings	2.85±1.09	1.00±0.0	(-) 1.85±1.09	7.59	<0.001
Interval between two episodes	1.50±1.31	54.35±14.46	52.85±14.48	16.43	<0.001

Mean day time effects reduced from 7.95 to 0.15 considerably. This is highly significant improvement considering statistics ($p<0.001$). Mean duration of sleep onset was 2.44 hours

before the treatment. It reduced to 0.36 hours after the treatment, 't' value is 13.76. Statistically this improvement was highly significant ($p<0.001$). Mean sleep duration increased from 3.70 hours: before the treatment to 6.75 hours after the treatment, 't^1 value is 32.76. Mean nocturnal awakenings recorded were 2.85 before the treatment and improved to 1.00 post-treatment, 't' value was 7.59. Statistically this reduction is highly significant (p0.001). Mean interval between episodes increased from 1.50 days to 54.35 days before and after the treatment respectively, 't' value is 16.43. The change is highly significant statistically ($p<0.001$).

Vital Statistics.

Variable	Before Treatment (Mean + SD)	After Treatment (Mean + SD)	Change after Treatment (Mean + SD)	't^1	V
Pulse rate (per minute)	75.30+5.99	72.50+1.93	2.80+5.37	2.33	<0.05
Systolic BP (mmHg)	125.80+14.48	123.50+9.33	2.30+8.11	1.27	NS
Diastolic BP (mmHg)	79.40+7.76	79.00+6.41	0.40+4.73	0.38	NS
Respiration rate (per minute)	20.90+1.82	20.10+1.52	0.80+1.05	3.42	0.001
Temperature (°C)	Normal	Normal	No change		

Daily recording of vitals was done before and after the procedure of *Shirodhara.* Considering vitals, pulse rate and respiratory rates decreased significantly after the treatment. Pulse rate was reduced from a pre-treatment mean value 75.30 per minute to 72.50 per minute after the treatment. Mean respiratory rate decreased to 20.10 per minute from a pre-treatment value of 20.90 per minute. No significant difference could be found in the mean blood pressure readings of the patients before and after the treatment. Temperature remained normal in all the patients throughout the trial period.

Changes in variables (Hb%, TLC, DLC, ESR and blood sugar) after treatment are not significant.

Overall assessment.

Arogya		*Kinchit Arogya*		*Anarogya*		*Roga Vridhi*	
No.	%	No.	%	No.	%	No.	%
17	85	3	15	-	-	-	-

Statistically, there was no significant difference in the results but *Arogya* is slightly better where *Shirodhara* was used concurrently with the oral drug therapy. This may be correlated with the fact that *Shirodhara* is a procedure for *Snehana karma.* This is *Vatanashana* and *Kapha Vardhaka* in action which results in decrease in vitiated *Vata* and enhancement in *Kapha* which results in *Nidrajanan* effect. This added to the efficacy of the *Kanamula churna* thus providing better results.

Considering these facts we find that the present drugs used for the trial have produced a significant improvement in all the cases of *Anidra* in both groups. Patients of both the groups reported benefit in various aspects. Each and every aspect related to this disease was touched by the clinical trial.

There was an overall improvement in the patients regarding ability to fall asleep, maintain sleep and satisfaction from sleep. A complete multifaceted recovery process was initiated by the treatment which was evident in an improved general condition, reduced day time effects and absence of addiction, dependence and relapse.

DISCUSSION

Anidra, the psychosomatic disorder of modern civilization is purely a *vatic* (neurological) disease of worldwide prevalence. In Ayurvedic classics *Anidra* is commonly related to involvement of *Manovaha Srotasas* and *Indriyas* resulting in impaired ability to concentrate, poor memory, reduction in working capability, stamina and leads to behavioral changes in human beings.

In Ayurvedic classics *Murdha* is the seat of *Prana Vayu* and *Tarpak Shleshma.* When these two vital elements are in equilibrium the *Manovaha Srotasas* and *Indriyas* are able to perform in coordination and the phenomenon of *Nidra* also occurs physiologically. When *Vata,* vitiated due to its *Naidanik Hetus* moves to reside in *Uttamanga; Manovaha Srotasas* and *Indriyas* are involved and functional capacity of *Tarpak Shleshma* decreases qualitatively and quantitatively. Thus increase in *Vata* and *Kapha Kshaya* leads to *Anidra.* In clinical practice variety of drugs are available to treat those types of cases symptomatically, the Ayurvedic approach to treat *Anidra* is multidimensional and counteracts the *Naidanik Bhavas of Anidra.* The present drug trial composed of *Shirobhyanga* in established cases *of Anidra.*

The probability of pharmacological actions of these procedures was hypothetically estimated on the basis of Ayurvedic principles and qualities of trial drugs. The constituents of these preparations presumably act in the manner discussed below.

Chakra taila used for Shirodhara

Chakra taila contains Kshirvidari, Madhuyashti, Devdaru, Saral Kashtha, Gokshur, Brihati, Kantakari, Shalparni, Prishniparni. Snehan karma like Abhyanga, Tarpana, Murdha taila, *Lepan, Shirodhara are the karmas (procedures) applied externally on the Uttamanga, the seat of Buddhi, Gyana, Smriti, Chetana and Viveka acts upon the Shariric and Manasika doshas improves the function of manovaha srotasas and ultimately contributes to a change in life style in a human being. Most of the drugs are Madhura in rasa, guru, snigdha in guna and ushna in veerya, vata-pittaghna in action. Thus, these drugs are Kapha vardhak (tarpak shleshmd) in properties. Side by side some of the drugs are Balya, Vrishya, Nadibalya, Brinhan, Rasayan and Medhya. So the combination of medicated oil Chakra taila used for shiro dhara in cases of Anidra definitely performs the classical views i.e. Vatahara, Snehan, Tarpan Karma at the site -Manovaha Srotas and Indriyas. Thus, this procedure treats the unbalanced state of vitiated Prana Vayu and subdued Tarpak Shleshma to a state of equilibrium and promotes the Nidrajanan prabhava.*

CONCLUSION

The action of drug was excellent and *Nidrajanan* effect was achieved within 4 weeks in majority of the cases. All the patients 100% could successfully go to sleep without the aid of any procedure, sleep inducing drugs *etc.* or with simple meditation and drinking milk after the trial. Both sleep hours and sleep maintenance increased significantly in the patients after the drug trial. General condition of all the patients improved significantly after the drug trial. There was a significant decrease in both systolic and diastolic blood pressure in these patients after the drug trial. No adverse effect was observed in any of the patients and the drug was very well tolerated by all in the prescribed dose. Patients did not develop any dependence or addiction for the drug as was observed in the follow up. No patient has reported any relapse till date. *Chakra taila* used for *Shirodhara* promotes the action *Snehan, Tarpon, Nadibalya Vrishya Medhya* and *Rasayana* thus *Vata pittaghna* in nature and improves the functioning of *Uttamanga* and *Pranayatan.* The therapeutic approach applied in the clinical trial establishes a homeostasis between the vitiated *Vata (Prana Vayu)* and depleted *Kapha (Tarpak*

Shleshma) at the site of *Nadisthana Murdha.* This phenomenon lies beneath its *Nidra janana prabhava.*

REFERENCES

1. Rajendra V. et.al, *Concept of Insomnia in Ayurveda*, Journal of Biological and Scientific opinion, Aug. 2014; 2(4): 275-278.
2. Michael J. Thorpy, *Classification of Sleep disorders*, Neurotherapeutics, Oct. 2012; 9(4): 687-701.
3. Luc Staner, *Sleep & Anxiety disorders*, Dialogues in clinical neuroscience, Sep. 2003; 5(3): 249-258.
4. Kaviraj Ambikadatta Shastri, Bhashajya Ratnavali, Chaukhamba Sanskrit Sansthan, Varanasi, 5th edition, 21/ 9., 1999.
5. Kaviraja Ambika Dutta Shastri, Sushrut Samhita, Published by Chaukhamba Sanskrit Sansthana, IXth Edition, Chikitsa 24/27-28., 1995.
6. Agnivesha, Charaka Samhita, Ayurveda Deepika Comm. of Chakrapani, edited by Yadavji Trikamji Acharya, Chaukhamba Surabharati Prakashana, Varanasi, Su. 27/287., 2000
7. Dr. Brahmananda Tripathi, Astang Hridaya of Vagbhata: by, Published by Chaukhamba Sanskrit Pratisthana, Delhi, Sutra 5/55., 1999.
8. Agnivesha, Charaka Samhita, Ayurveda Deepika Comm. of Chakrapani, edited by Yadavji Trikamji Acharya, Chaukhamba Surabharati Prakashana, Varanasi, Su., 2000; 27/286.
9. Kaviraja Ambika Dutta Shastri, Sushrut Samhita, Published by Chaukhamba Sanskrit Sansthana, IXth Edition, 45/112., 1995.
10. Dr. Brahmananda Tripathi, Astang Hridaya of Vagbhata: by, Published by Chaukhamba Sanskrit Pratisthana, Delhi, Sutra 5/56., 1999.