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A Clinical Study to evaluate *Pragbhakta* and *Adhobhakta Bhaishajya Kala* in *Janu Sandhigata Vata*

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ABSTRACT

Bhaishajya Kala is an important principle in our classics, which is to be considered while treating a disease. During treatment, success can be achieved only when there is proper combination of *Desha*, *Kala*, *Pramana*, *Satmya*, *Asatmya*, *Pathya* and *Apathya*.^[1] Among these seven, *Kala* is given second position which reflects importance of *Kala* in *Chikitsa*. The relation between *Aushadha* and *Kala* is well established in classics. *Acharya Charaka* states that "medicine administered at appropriate *Kala* is more efficacious than one given in inappropriate *Kala*."^[2] To highlight its role in *Chikitsa*, there is a necessity to analyze this concept which is the need of the hour. With the intention of practically validating this concept "*Janu Sandhigatavata*" has been taken up for the study. *Panchatikta Guggulu Ghrita* which has been taken for the study is seen to have beneficial therapeutic effects on *Sandhigatavata* as evidently seen in the *Phalashruti*.^[3] As *Bhaishajya Kala* is not specifically mentioned for any *Vatavyadhi* so also for *Janu Sandhigatavata*, this study intends to find the appropriate *Bhaishajya Kala* for the same. Among all the *Bhaishajya Kalas*, in the present study only two *Kalas* were taken up which were suitable for *Janu Sandhigatavata*. The clinical trial was carried out on 40 patients. They were divided into two groups Group A and Group B consisting of 20 patients each. The results were analyzed based on the signs and symptoms. Statistical analysis between Group A and Group B for the parameters *Sandhi Shoola*, *Shotha*, *Prasaranaakunchanyo Vedana*, ROM and VAS pain scale found no significant changes in the group. Individually each Group had highly significant results. But in the observation parameter of *Atopa* there was a difference of value between the groups, Group A was higher than Group B.

Key words: *Pragbhakta*, *Adhobhakta*, *Bhaishajya Kala*, *Janu Sandhigata Vata*.

INTRODUCTION

In the present era more focus is given on medication than on the timing of administration of medicine. To treat any disorder, the important factors are *Bhishak*,

Aushadha, *Rogi* and *Paricharaka*, these are rightly called *Chikitsa Chatuspadas*. Among the *Chatuspadas* doctor is the essentiality, the very next essentiality is *Aushadha* or medicine. *Aushadha* or medicine is getting all the importance in the ways of manufacturing it or its expiry etc. Though *Aushadha* will have all the properties and potency required to treat a particular disorder, if not administered at proper time, one cannot expect the appropriate results. Time is the factor which keeps changing every moment and it does not wait for anyone. In the same way, timing to give a medicine is important to reach its target site, as *Avastha* of a particular condition keeps progressing and does not wait for anyone. It is rightly said by *Charaka* that, the *Aushadha* administered at *Ateeta Kala* (after the time) or *Aprapta Kala* (before time) is not effective or not

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Yogya (suitable), because time decides the proper outcome of medicine administered. Medicine may act even if administered at different times, but the purpose for what it is given will not be fulfilled.

Sandhigata Vata is a type of *Vatavyadhi* which manifests when deranged *Vata* lodges in *Sandhis* (joints). Though this disease is usually seen in old age, nowadays due to change in life style, it is seen occurring in early age too. *Sandhigata Vata* is described under *Vatavyadhi* in all *Samhitas* and *Sangraha Granthas*, its symptoms resemble Osteoarthritis. Osteoarthritis is the second most common rheumatologic problem. Globally around 250 million people have Osteoarthritis of the knee which accounts to 3.6% of the population. And it is the most frequent disease with a prevalence of 22% to 39% in India.

REVIEW OF LITERATURE

Bhaishajya Kala has been quoted in all Ayurvedic classics. *Acharya Charaka* clearly mentions ten *Bhaishajya Kalas* as *Niranna*, *Pragbhojana*, *Bhuktamadye*, *Bhuktapaschat* (*Pratah*), *Bhuktapaschat* (*Sayam*), *Muhurmuhu*, *Samudga*, *Bhaktasamyukta*, *Grasa*, *Grasantare*.^[4] *Acharya Sushruta* accepted *Charaka's Bhaishajya Kalas*, but he does not split *Adhobhakta* into two and restores number ten by adding *Antaraabhakta*.^[5] *Astanga Sangraha* follows *Sushruta* but adds *Nishi Kala*^[6] and increases number to eleven. *Astanga Hridaya* mentions ten *Kalas*.^[7] *Sharangadhara Samhita* mentions only five *Kalas*, according to part of the day as *Suryodayejate*, *Diwasabhojane*, *Saayante*, *Muhur* and *Nishi*.^[8]

Considering that *Sandhigata Vata* could be due to *Vyana Vayu* and *Apana Vayu*, two *Kalas* were selected, as *Pragbhakta Kala* and *Adhobhakta Kala*.

Pragbhakta Kala

Pragbhakta means administration of drug just prior to the meal. Consumed in this manner the medicine becomes quickly digested, doesn't harm the strength of the body, being enveloped by the food it does not

come out of the mouth.^[9] The medicine consumed just before food does not decrease the *Bala*.^[10]

Sharangadhara mentions it as a sub division of *Divasa Bhojana Kala*.^[11]

It is useful in the diseases caused due to *Apana Vata*, in the diseases of lower extremities, for strengthening of the *Adha Kaya* (lower part of the body), also for making the body thin (*Krushikarana*).^[12] According to *Kashyapa Samhita*, it does *Amashayagata Dosha Nirharana* and gets digested faster. As food *Stambana* or suppression of medicine, it stops *Chardi*, *Udgara* and *Vyathaadi*. Hence it is used in *Durbala Rogi*.

Adhobhakta Kala

Adhobhaktam means administration of medicine immediately after the meal.^[13] *Acharya Chakrapani*, divides this *Kala* into *Pratah Bhojonataram* and *Sayam Bhojonotaram*.^[14]

When *Vyana Vata* is vitiated medicine is administered at the end of the meal. Medicine taken soon after meals cures different diseases of the upper parts of the body and bestows strength.^[15]

Astanga Sangraha mentions indications based on two *Aharakalas*, i.e. in diseases due to *Vyana Vata* it should be immediately after the morning meal (*Prataharashitam*), and in diseases due to *Udana Vata* it should be after the evening meal (*Sayam Bhojana Kala*). The second method is useful for strengthening the upper part of the body and cure of their diseases, diseases caused by *Kapha*. Also helps to cause stoutness (*Sthulikarana*) of *Deha*.^[16]

AIMS AND OBJECTIVES

To clinically compare the efficacies of *Pragbhakta* and *Adhobhakta Bhaishajya Kala* in *Janu Sandhigatavata*.

MATERIALS AND METHODS

Source of Data

Patients of either gender diagnosed with *Janu Sandhigatavata* were selected from the O.P.D and I.P.D of SSCASR Hospital, Bangalore.

Study Design

A comparative clinical study

Sample Design: Simple Randomized Sampling

Sample Size: 40

Inclusion Criteria

1. Patients aged between 45 to 65 years, irrespective of gender, caste, occupation and economic status.
2. Patients presenting with classical signs and symptoms of *Janu Sandhigatavata* such as *Shula*, *Shotha*, *Prasarana Akunchana Vedana*, *Atopa*.

Exclusion Criteria

1. Patients below 45 and above 65 years of age.
2. Patients suffering from diseases like diabetes mellitus, psoriatic arthritis, *Vatarakta* and other joint inflammatory disorders.
3. Complications which can intervene the course of treatment.
4. Osteoarthritis of knee as a consequence of external injuries like fractures and dislocations.
5. Pregnant and lactating women.
6. Patients with *Mandagni*.

Intervention**For Group A**

The patients with Group A were administered with *Panchatikta Guggulu Ghrita* with a dose of 20ml just before the morning food (*Pragbhakta Kala*) followed by drinking hot water for a duration of 30 days, followed by a follow up period of 15 days.

For Group B

The patients with Group B were administered with *Panchatikta Guggulu Ghrita* with a dose of 20ml just after the morning food (*Adhobhakta Kala*) followed by drinking hot water, for a duration of 30 days, followed by a follow up period of 15 days.

Assessment Criteria

Assessment was made based on a clinical grading given to the parameters related to *Janu Sandhigatavata*. The parameters are classified into: Subjective and Objective Parameters

Table 1: Gradings for Subjective Parameters^[17]

SN	Parameters	Grading	Score
1.	<i>Janusandhi shoola</i>	Absent	0
		Mild (Interfering with ADL's)	1
		Moderate (Interfering significantly with ADL's)	2
		Severe (disabling, unable to perform ADL)	3
2.	<i>Janusandhi shotha</i>	Absent	0
		Slight more with comparison to normal	1
		Much elevated, joint seems grossly deformed	2
		More elevated	3
3.	<i>Atopa</i>	Absent	0
		Palpable	1
		Audible	2
		Clearly audible	3
4.	<i>Prasarana Akunchanyo Vedana</i>	Absent	0
		Without wincing of face	1
		With wincing of face	2

		Shout/stop complete movement	3
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Table 2: Gradings for Objective Parameters.

SN	Parameters	Grading	Score
1.	VAS pain scale ^[18]	No hurt	0
		Hurts little bit	2
		Hurts little more	4
		Hurts even more	6
		Hurts whole lot	8
		Hurts worst	10
2.	ROM for flexion ^[19]	No limitation of flexion (flexion $\geq 135^\circ$)	0
		Mild limitation flexion (flexion $< 135^\circ$ but $\geq 90^\circ$)	1
		Moderate limitation flexion (flexion $< 90^\circ$ but $\geq 45^\circ$)	2
		Severe limitation of flexion (flexion $< 45^\circ$)	3
3.	ROM for extension	Normal full extension to 0° possible	0
		Restricted, full extension to 0° not possible	1

Statistical analysis

Statistical analysis to assess the comparative effects of the groups was done using Paired t-test, Friedman test.

OBSERVATIONS AND RESULTS

Observation was done every 15th day. The total period of the study was 45 days, with 30 days intervention and 15 days of follow up. The results were evaluated by the parameters mainly based on the observations that are *Janusandhi Shula*, *Shotha*, *Prasarana*

Akunchanyo Vedana, *Atopa*, VAS pain scale and ROM by grading method. The observations and results were assessed before treatment, during treatment, after treatment and after follow up. For each follow up, the scores were compared with the pre test scores and the statistical analysis was done.

Observations in the present study were done in three stages:

- General observations of all the subjects
- Observations during interventions
- Observations on Results

a) General observations

In the present study total 46 Subjects were registered, out of which 6 Subjects discontinued the treatment during various stages of the clinical study and with 40 Subjects clinical study was completed.

Table 3: Showing distribution of Subjects according to Age

Age	No. of Subjects	Percentage (%)
45 - 50	12	30%
51 - 55	11	27%
56 - 60	4	10%
61 - 65	13	33%

In the present study there was limitation for age. Subjects between the age Group of 45-65 were selected. It was found that the Subjects of age Group between 45-50 years were 12(30%), 51-55 years were 11(27%), 56-60 years were 4 (10%) and 61-65 years were 13 (33%).

Table 4: Showing distribution of Subjects according to gender

Gender	No. of Subjects	Percentage (%)
Males	11	27%
Females	27	73%

In the present study it was observed that more number of Subjects were females i.e. 27(73%) and male Subjects were 11 (27%).

Table 5: Distribution of Subjects based on presentation of Janusandhi Shula

Presentation	Total	Percentage (%)
Unilateral	23	57%
Bilateral	17	43%

In the present study, it was seen that maximum Subjects 23 (57%) had presentation of *Janusandhigata Vata* unilaterally and 17 Subjects (43%) had bilateral presentation.

Several other observations were done which were not found to have much relevance to the present article and hence, have not been tabulated here.

b) Observations during intervention

- Subjects of Group B felt difficulty to take medicine in *Adhobhakta Kala*.
- Many Subjects complained of headache for first two days after taking the medicine.
- Subjects of Group A had no problem to take Medicine.

Janusandhi Shula

- On observing the results it was noted that there was improvement in both the groups that is Group A and Group B with statistically highly significant p value 0.000, in right knee and left knee.

Janusandhi shotha

- On observing the results it was noted that there was improvement in both the groups that is Group A and Group B with statistically highly significant p value 0.000, in right knee and left knee.

Prasaran Aakunchanyo Vedana

- On observing the results it was noted that there was improvement in both the groups that is

Group A and Group B with statistically highly significant p value 0.000, in right knee and left knee.

Atopa / crepitus

- On observing the results it was noted that there was improvement in Group A with statistically highly significant p value 0.001 and there was significant change statistically in Group B with p value 0.194 in the right knee. Left knee Group A p value 0.004 and Group B p value 0.112. Comparatively Group A shows significant result than Group B.

Note: Statistical analysis between Group A and Group B for the parameters *Sandhi Shoola, Shotha, Prasarana Akunchanyo Vedana*, ROM and VAS pain scale found no significant changes when compared. Individually each Group had highly significant results. But in the observation parameter of *Atopa* there was a difference of value between the groups, Group A was higher than Group B.

Atopa/ Crepitus

Table 6: Showing the results of Atopa Right knee

Groups	Grading	Before	During	After	Follow up	Statistics
Group A	No	4 (20%)	5 (25%)	5 (25%)	5 (25%)	Friedman Test Significance: Rt:0.001 Remarks: Highly Significant
	Palpable	8 (40%)	8 (40%)	13 (65%)	14 (70%)	
	Audible	8 (40%)	7 (35%)	2 (10%)	1 (5%)	
	Clearly audible	0 (0%)	0 (0%)	0 (0%)	0 (0%)	
Group B	No	5 (25%)	6 (30%)	5 (25%)	5 (25%)	Friedman Test Significance

Palpable	7 (35%)	8 (40%)	10 (50%)	10 (50%)	ce: Rt:0.194 Remarks: Not significant
Audible	8 (40%)	6 (30%)	5 (25%)	5 (25%)	
Clearly audible	0 (0%)	0 (0%)	0 (0%)	0 (0%)	

Table 7: Showing the results of *Atopa* Left Knee

Groups	Grading	Before	During	After	Follow up	Statistics
Group A	No	7 (35%)	7 (35%)	7 (35%)	7 (35%)	Friedman Test Significance: Lt:0.004 Remarks: Highly Significant
	Palpable	4 (20%)	5 (25%)	10 (50%)	11 (55%)	
	Audible	9 (45%)	8 (40%)	3 (15%)	2 (10%)	
	Clearly audible	0 (0%)	0 (0%)	0 (0%)	0 (0%)	
Group B	No	6 (30%)	6 (30%)	6 (30%)	6 (30%)	Friedman Test Significance: Lt:0.112 Remarks: Not significant
	Palpable	5 (25%)	7 (35%)	9 (45%)	9 (45%)	
	Audible	9 (45%)	7 (35%)	5 (25%)	5 (25%)	
	Clearly audible	0 (0%)	0 (0%)	0 (0%)	0 (0%)	

Illustration 1: Showing results of *Atopa* Right Knee Group A

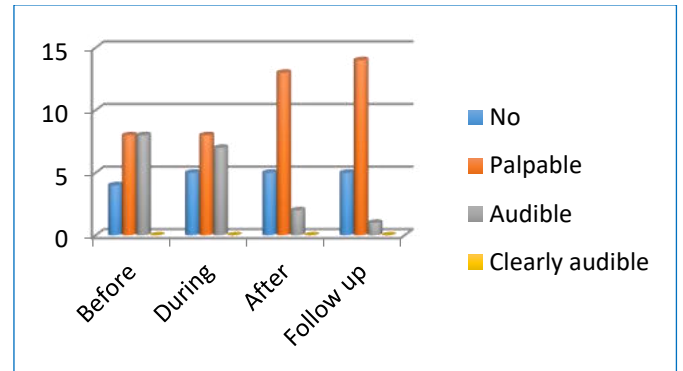


Illustration 2: Showing results of *Atopa* Right Knee Group B

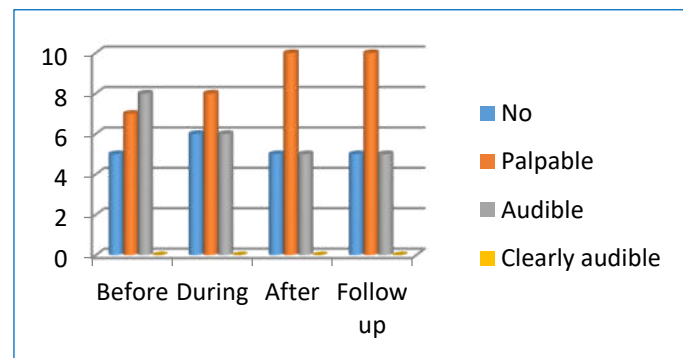


Illustration 3: Showing results of *Atopa* Left Knee Group A

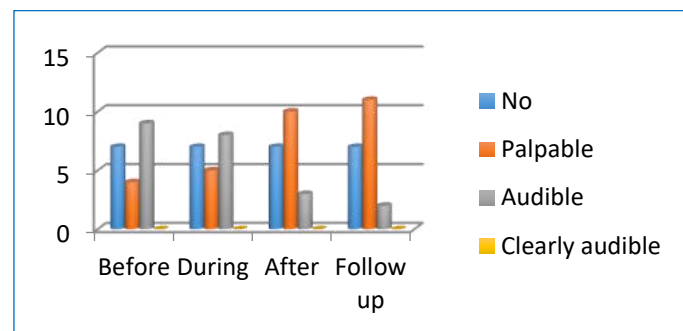
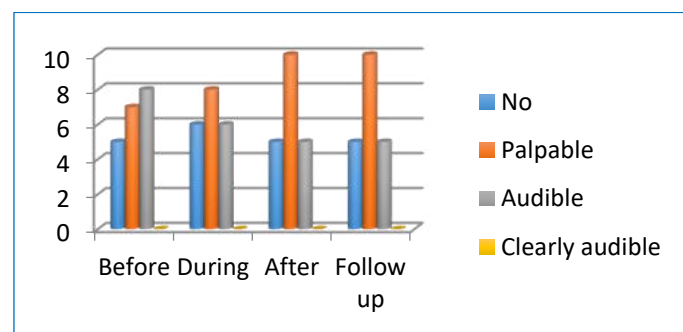


Illustration: Showing results of *Atopa* Left Knee Group B



DISCUSSION

Probable Mode of action of *Pragbhakta Kala* and *Adhobhakata Kala*

Pragbhakta Kala

It is the administration of medicine just before the food.

Sheegram Vipakam : That is *Vipaka* occurs immediately, as medicine is the first one to come in contact with the *Agni* and *Agni* will be in the highest potency.

Balam Na Himsayad : the medicine given in this *Kala* would not hamper the strength of the body, as food is taken immediately after the medicine and that helps to combat the effects of medicine.

It does not come out of mouth after the intake, as it is covered by the food.

Annadau Vigune Apane : It acts on *Vikaras* related to *Apana Vata*, as it is the first one to come in contact with the *Agni*, gets digested faster and as food is taken after the medicine it helps the medicine to act on *Apana Vayu*. *Apana* related *Vyadhi's* like *Vibandha*, *Arshas*, *Bhangadhara*, *Yoni Rogas*, *Shukra Dusti*, *Udavarta*, *Sandhigatavata* etc. can be treated using this *Kala*.

Adhakayasya Baladhanartha : Medicine given in this *Kala* provides strength to lower part of the body. If a medicine given has *Balavardhaka* properties, improves all the *Adha Kaya Angas* like *Garbhashya*, *Mutrashaya* etc. due to action on *Apana Vayu*.

In the present study, *Janu Sandhi* is the *Adhistana* and it comes in *Adha Kaya*.

Hence *Pragbhakta Kala* was selected for Group A.

Adhobhakta Kala

Administration of medicine just after the intake of food. *Adhobhakta Kala* are two, one is *pratarashitam* and second is *Sayam Bhojanottarakalam*.

Pratahbhojanottarakala is indicated in *Vyana Vata Vikaras*. *Vyana Vayu* helps in functions like flexion (*Prasarana*), extension (*Aakunchana*), *Utkeshepa*, *Avakshepa* and *Gamana* of limbs.

Once *Ahara* is taken and *Ahara Rasa* is formed, it is carried to *Hridaya* by *Vyana Vayu*. In the same way when medicine is given after the food, this also takes the path of *Ahara Rasa* and reaches *Hridaya*, which in turn circulates all over the body.

Balam Dadati : it provides strength. If the medicines having *Balavardhaka* properties are given in this *Kala*, it nourishes and enhances strength.

In the present study, *Janusandhi* is the *Adhistana*. *Vyana Vayu* instigates all the movements throughout the body, which invariably involves the *Janusandhi* too. Hence *Adhobhakta Kala* was selected for Group B.

Discussion on results

Janusandhi Shula

Generally *Shula* is *Vata Pradhana*, the study involves *Janusandhigata Shula*, *Pragbhakta Kala* works on *Adha Kaya*.

The *Sandhi Pradesha* is responsible for *Chesta* (movements), for any movements *Vyana Vayu* is responsible, *Adhobhakta Kala* works on *Vyana Vayu*. Thus, both the Groups have shown good results.

Janusandhi Shotha

Shotha occurs due to decrease in *Shleshaka Kapha* in *Sandhi*, *Pragbhakta Kala* has *Balavardhana* (promotes strength) effect in *Adha Kaya*.

Adhobhakta Kala does *Sthulikarana* of *Sharira*, so it does *Santarpana* (*Snehana*) to *Janusandhi* too, decreases *Vata* hence acts well on *Shotha*.

Hence, both the groups have shown good effects on *Janusandhi Shotha*.

Prasarana Akunchanyo Vedana

Shula during *Prasarana* and *Aakunchana* of *Sandhi* is due to the aggravated *Vayu* and depletion in the *Asthi*. *Pragbhakta Kala* and *Adhobhakta Kala*, play their roles by *Adhokaayasya Baladhana* (by providing strength) and *Cheshta Pravrtti* (initiation of movement) respectively, thus causing reduction in pain during movement. Hence both the groups have shown good results.

Atopa / crepitus

The medicine given in *Pragbhakta Kala* (Group A), will have *Sheegra Vipaka* (absorption of medicine is faster), so *Snehana* to *Sandhi* occurs rapidly; decreases aggravated *Vata* and there will be increase in *Shleshaka Kapha*. Hence, there is good amount of lubrication due to which *Pragbhakta Kala* (Group A) has shown better results.

Overall assessment

By observing the overall results, it was noted that there was marked improvement seen in both the groups with statistically highly significant P value 0.000 in Group A and Group B.

Due to better results shown in *Atopa Lakshana* in the present study by Group A, we can conclude that *Pragbhakta Kala* is better than *Adho Bhakta Kala*.

CONCLUSION

Bhaishajya Kala has close association with *Ahara* and making it available to the target site. Hence even a mild or lower potency medicine might acquire a better potency or vice versa.. Hence, we can vary *Kala* and optimize the potentiality of medicine. Unilateral presentation of *Janusandhigata Vata* was seen more than the bilateral presentation in the present study. Prevalence of *Janusandhigata Vata* was more in females; however Incidence was more seen in Menopausal women. Though *Vata Prakopa* is essentially mentioned in the *Samprapti* of *Janusandhigata Vata*, both *Apana* and *Vyana Vata* seem to have influence in the manifestation of *Janusandhigata Vata* as both of their roles are prominently seen. The *Janusandhi* is located in *Adha Kaya* (lower part of the body) and it is seen that *Apana Vayu* is involved in *Sandhis* of *Adha Kaya*, hence *Pragbhakta Kala* showed good result. The reason for *Adhobhakta Kala* showing significant result was; *Vyana Vayu* which is most essential for *Chesta* (movements), is invariably involved in *Janusandhi Chesta* also. Though the significance is not having comparable difference between Group A and B, due to better results shown in the parameter *Atopa* by Group A, we can probably conclude that *Pragbhakta*

Kala is better than *Adho Bhakta Kala*. Also, because acceptability by patient was better in Group A (*Pragbhakta Kala*).

REFERENCES

1. Acharya Y. T., Charaka Samhita of Agnivesha with the Ayurveda Dipika commentary by Sri Cakrapanidatta, Varanasi, Chaukhamba Surabharati Prakashan, Reprint edition 2013; p646
2. Acharya Y. T., Charaka Samhita of Agnivesha with the Ayurveda Dipika commentary by Sri Cakrapanidatta, Varanasi, Chaukhamba Surabharati Prakashan, Reprint edition 2013; p282
3. Paradakara Hari Sadasiva Sastri, Astanga Hrdaya of Vagbhata with the commentaries Sarvanga Sundara of Arunadatta and Ayurveda Rasayana of Hemadri, Varanasi, Chaukhamba Surbharati Prakashan, Reprint edition 2014; p726
4. Acharya Y. T., Charaka Samhita of Agnivesha with the Ayurveda Dipika commentary by Sri Cakrapanidatta, Varanasi, Chaukhamba Surabharati Prakashan, Reprint edition 2013; p646
5. Acharya J.T., Susruta Samhita of Susruta with the Nibandha Sangraha commentary of Sri Dalhanacharya, Varanasi, Chaukhamba Surabharati Prakashan, Reprint edition 2012; p813
6. Sharma shivprasad., Astanga Samgraha of vahata or Vrddha vagbhata with the sasilekha sanskrit commentary, Varanasi, Chowkhamba Sanskrit Series Office, Reprint edition 2012; p179
7. Paradakara Hari Sadasiva Sastri, Astanga Hrdaya of Vagbhata with the commentaries Sarvanga Sundara of Arunadatta and Ayurveda Rasayana of Hemadri, Varanasi, Chaukhamba Surbharati Prakashan, Reprint edition 2014; p219
8. Shastri P P., Sarangadhara Samhita of Sarngadhara Acharya. 5th ed. Varanasi Choukhamba Orientalia, Reprint edition 2002; p16
9. Acharya J.T., Susruta Samhita of Susruta with the Nibandha Sangraha commentary of Sri Dalhanacharya, Varanasi, Chaukhamba Surabharati Prakashan, Reprint edition 2012; p813
10. Bhisagacharya Sri Satyapala, Kasyapa Samhita by Vrddha Jivaka with Vidyotini Hindi commentary,

- Varanasi, chaukambha Sanskrit sansthan, Reprint edition 2018;p368
11. Shastri P. P., Sarangadhara Samhita of Sarngadhara Acharya. 5th ed. Varanasi Choukhamba Orientalia, Reprint edition 2002; p17
 12. Sharma shivprasad., Astanga Samgraha of vahata or Vrdda vagbhata with the sasilekha Sanskrit commentary, Varanasi, Chowkhamba Sanskrit Series Office, Reprint edition 2012; p180
 13. Acharya J.T., Susruta Samhita of Susruta with the Nibandha Sangraha commentary of Sri Dalhanacharya, Varanasi, Chaukhamba Surabharati Prakashan, Reprint edition 2012;p813
 14. Acharya Y. T., Charaka Samhita of Agnivesha with the Ayurveda Dipika commentary by Sri Cakrapanidatta, Varanasi, Chaukhamba Surabharati Prakashan, Reprint edition 2013; p647
 15. Acharya J.T., Susruta Samhita of Susruta with the Nibandha Sangraha commentary of Sri Dalhanacharya, Varanasi, Chaukhamba Surabharati Prakashan, Reprint edition 2012;p813
 16. Sharma shivprasad., Astanga Samgraha of vahata or Vrdda vagbhata with the sasilekha Sanskrit commentary, Varanasi, Chowkhamba Sanskrit Series Office, Reprint edition 2012; p180
 17. Vaidya Patil Arati S, Dr. Parashurami S.P, Clinical study on Rasnapanchaka Kwath In Sandhigata Vata, research article international Ayurvedic medical journal ISSN;2320 5091
 18. McCormack HM, Horne DJ, Sheather S. Clinical applications of visual analogue scales: a critical review. *Psychol Med* 1998; 18: 1007-19
 19. C lakshmy, V.C.Deep, A clinical study of knee joint injury with karkada taila, International journal of ayurveda and pharma research, case study; ISSN;2322 0902(p)

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