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ROLE OF ROOKSHANA AS POORVAKARMA FOR VAMANA IN THE MANAGEMENT OF STHOULYA W.S.R. TO OBESITY

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ABSTRACT

Obesity is a chronic metabolic disorder, burning and challenging problem for medical science with worldwide distribution. Obesity being the risk factor for several diseases and hence prevention of obesity will decrease the chances of such diseases. In Ayurveda, *Sthoulya* comes under *Santarpanajanya* and *Medo-Pradoshaja Vikara* which is also *Kapha Pradhana Vyadhi* where *Apatarpana* treatment modalities like *Rookshana* is indicated. Because it involves *Marma*, major *Doshas* and also for its *Abhishyandi* nature *Rookshana* has been mentioned as *Poorvakarma* for *Mamsala*, *Medhura*, *Bhurishleshma* and *Vishamagni* persons before *Snehapana* prior to *Shodhana* where *Sthoulya* is one such condition. *Vamana* being an appropriate *Shodhana* procedure which is specific for the elimination of vitiated *Kapha Dosha* and also indicated in *Sthoulya*. **Objectives of study:** To evaluate and compare the effects of *Sneha Poorvaka Vamana Karma* and *Rookshana Poorvaka Vamana Karma* in the management of *Sthoulya* w.s.r. to Obesity. **Materials and methods:** Randomized comparative clinical study of 2 Groups, Consisting of 15 patients in each group. Group RS: *Rookshna – Bahya and Abhaynatara*, *Snehapana*, *Vamana Karma*. Group S: *Snehapana*, *Vamana Karma*. **Results and interpretation:** The study has shown that statistically significant difference between each group in its efficacy. **Conclusion:** On the basis of the

results it can be stated that overall effect of *Rookshana Poorvaka Vamana* was far better in comparison to *Sneha Poorvaka Vamana*.

Keywords: Obesity, Sthoulya, Rookshana, Snehapana, Vamana.

INTRODUCTION

Scientific and technological progress has made man highly sensitive and critical; there by giving rise to different types of health problems. The advancement of industrialization and communication is contributing towards sedentary lifestyles, which further results in overweight and obesity that lead to significant health and social difficulties for people. Today's way of life is less physically active than it used to be. Obesity is when a person is carrying too much body fat for their height and sex. A person is considered obese if they have a BMI of 30 or greater. It may "lengthen the waistline" but "shortens the lifeline" of the individual by imposing an extra burden on all the systems of body. It is directly linked to chronic noncommunicable diseases like type 2 diabetes mellitus, hypertension, ischemic heart disease, cerebro-vascular accidents etc. Obesity treated by losing weight, which can be achieved through a healthy, calorie-controlled diet and increased exercise. Global incidence of mortality and morbidity is also highly alarming due to the secondary complication of the Obesity that, controlling the obesity has been considered as the need of the hour.

Ayurveda with its holistic approach can help in this condition with its unique way of lifestyle management with Panchakarma therapeutic treatments that cleanse the body's deep tissue toxins, open the subtle channels and bring life by enhancing energy thereby increasing vitality, inner peace, confidence & wellbeing. Obesity can be compared with Sthoulya which comes under Santarpanajanya¹ and Medo-Pradoshaja Vikara² which is also a Kapha Pradhana Vyadhi³ where Apatarpana treatment modalities like Rookshana⁴ is indicated. It has been mentioned as Poorvakarma for Mamsala, Medhura, Bhurishleshma and Vishamagni persons before Snehapana prior to Shodhana⁵ where Sthoulya is one such condition. Vamana is the best therapy for elimination of Kapha Dosha and also indicated in

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*Sthoulya*⁶. Taking all these points in view this clinical study was taken.

Materials and Methods

Source of Data.

Sample source: 30 patients fulfilling the inclusion criteria of either sex irrespective of age group between 30-60, socio-economic status and caste was randomly selected for the clinical study.

Drug Source: The drugs and their proportions have been standardized after pilot study. All the raw drugs for the preparation of *Udvartana Choorna* were procured from local market.

Method of Collection of Data

The qualitative data related to the condition was collected based on prepared case proforma. It includes complete case history, physical signs and symptoms, necessary lab investigations etc. The parameters are recorded based on standard methods and analyzed statistically.

Design of study

A randomized clinical study of two groups, consisting of 15 patients in each group has been taken. The study was done in two groups of patients

- 1. Rookshana Poorvaka Vamana group RS
- 2. Sneha Poorvaka Vamana group S

Diagnostic criteria:

The patient was diagnosed based on the following clinical features.

Chala - Stana, Udara, Sphik; Atiksudha; Atipipasa; Nidradikya; Daurgandya; Gourava

Inclusion criteria:

- Patients fulfilling the diagnostic criteria.
- Patients between the age group of 20 to 50 years.
- Patients who are fit for *Vamana* and *Rookshana Karma*.
- Patient having BMI (kg/m2) 25 to 35

Exclusion criteria:

- Obesity due to endocrinal abnormality
- Patients with systemic disorders which interfere with the course of the treatment.
- Patients contra indicated for *Vamana* and *Rookshana*.
- Patient having BMI (kg/m2) above 35

Interventions

Procedure: RookshanaPoorvaka R.S.Group:

Vamana

Poorva karma

Rookshana: Abhyantara Rookshana with

- 1. Pana- Nisneha Takra Pana (Buttermilk 300ml three times a day),
- 2. Anna-Yavanna (Yava in the form of chapathi i.e.1-2 chapathi, 3 times a day)
- 3. Bheshaja- Triphala Kwatha (15ml three times a day one hour before meal)

Bahya Rookshana in the mode of Sarvanga *Udvartana* with *Triphaladi Choorna* (45mins) followed by Usna Jala Snana. All the procedures were done simultaneously for 7 days or till the Samyak Rookshana Lakshana appears.

Snehapana: Moorchitha Tila Taila starting with Hrasiyasi Matra (30-50ml) Arohana-krama, till Samyak Snigdha Lakshana appear (3-7 days). During Vishraman kala Abhyanga with Moorchitha Tila Taila (30 mins) followed by Mrudu Baspa Sweda in the form of Sukoshna Jala Snana and Kapha Utkleshaka Ahara (Curd rice & Curd Vada).

Pradhana karma

Vamana Karma: Madhana Phala Pippali Choorna (ranging 5-8gms), Vacha Choorna (ranging 2-4 gms), Saindava Lavana (ranging 2-4 gms), Yasti Madhu Choorna (ranging 2-4 gms) mixed in Madhu (Quantum sufficient) for Vamana. Sukoshna Yastimadhu Kwatha & Saindhavajala used as Vamanopaga, till Samyaka Vamana Lakshana appears.

Pashchat Karma

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Dhoomapana with Haridradi Dhooma Varti followed by Tarpanadi Samsarjana Krama as per the shudhi.

S Group: Snehana Poorvaka Vamana Poorva Karma

Snehapana: Moorchitha Tila Taila starting with Hrasiyasi Matra (30-50ml) Arohana-krama, till Samyak Snigdha Lakshana appear (3-7 days). During Vishraman kala Abhyanga with Moorchitha Tila Taila (30mins) followed by Mrudu Baspa Sweda in the form of Sukoshna Jala Snana and Kapha Utkleshaka Ahara (Curd rice & Curd Vada).

Pradhana karma

Vamana Karma: Madhana Phala Pippali Choorna (ranging 5-8gms), Vacha Choorna (ranging 2-4 gms), Saindava Lavana (ranging 2-4 gms), Yasti Madhu Choorna (ranging 2-4 gms) mixed in Madhu sufficient) for Vamana. Sukoshna Yastimadhu Kwatha & Saindhava jala used as Vamanopaga, till Samyaka Vamana Lakshana appear.

Pashchat Karma

Dhoomapana with Haridradi Dhooma Varti followed by Tarpanadi Samsarjana Krama as per the Shudhi.

Follow up study: After Samsarjana Krama, follow up was done for a period of one month. During this period diet and exercise was advised to the patients.

Assessment Criteria:

Subjective:

Chala - Stana, Udara, Sphik; Atikshudha; Atipipasa; Nidradhikya; Daurgandya; Gourava

Objective:

1. Body weight 2. BMI (Kg/m2)

Anthropometrics features (Measuring skin fold thickness by using slide calipers). Triceps, Biceps, Sub Scapular, Abdomen and Thigh. Measurements taken at various levels viz, Chest, Abdomen, Buttock, Mid-thigh and Mid Arm.

Laboratory Investigations

The following investigations are done, if necessary

1. Blood Routine 2. Lipid Profile

DISCUSSION

In this clinical study a total of 30 patients fulfilling the inclusion criteria were studied and the effect of treatment on each sign and symptom were assessed before treatment, after Rookshana, Snehapana, Vamana, Samsarjana and follow up based on the assessment criteria mentioned earlier. The results of this study are according to the textual references. Generally, Vamana was preceded by internal Snehana but in Sthoulya the Kapha, Pitta, Mamsa and Meda

are already increased and internal *Snehana* may further increase them leading to the deterioration of the condition by causing *Sneha Vyapath*. As *Abhyantara Snehana* is a must prior to performing the *Vamana* therefore to overcome this problem of *Sneha Vyapath*, it is advised to do *Rookshana* prior to *Snehana*. *Bahu Drava Shleshma* and *Abadda Medas* are important in the etiopathogenesis of *Sthoulya*. The *Rookshana* clears the channels, which are obstructed by *Shleshma* and *Medas*. As *Rookshana* is having opposite qualities of *Shleshma* and *Medas*, it breaks the nexus of *Doshas* and removes the *Avarana*.

The increased *Kapha Pradhana Doshas*, which are brought to *Koshtha* by *Snehana* and *Svedana*, are expelled out by *Vamana*. Thus, *Rookshana Poorvaka Snehana* and *Vamana* help in expelling the *Doshas* in larger quantity and reduce the signs and symptoms of *Sthoulya*.

Effect on Chala Sphik, Stana And Udara:

- 1. The effect of treatment on *Chala Sphik* in R.S Group was statistically highly significant (P<0.001) by 38.23% relief and in S. Group it was statistically significant (P<0.05) by 17.64% relief.
- 2. The effect of treatment on *Chala Stana* on 2 Groups was statistically significant (R.S Group P<0.01 & S. Group P<0.05) where the relief was 37.93% in R.S. Group and 11.11% in S.Group.
- 3. The effect of treatment on *Chala Udara* on 2 Groups was statistically highly significant (P<0.001) where the relief was 62.79% in R.S.Group and 32.43% in S.Group.
- 4. Further analysis showed that *Rookshana* alone reduced the *Chala Sphik* by 32.35% (P<0.01), *Chala Stana* by 24.13% (P<0.01), *Chala Udara* by 32.55% with (P<0.001) which was more than half of the reduction done by Group S.
- 5. While looking the above results of R.S Group the reduction in *Chala Stana*, *Chala Udara* and *Chala Sphik* we can say that excess fat which is deposited in *Sphik*, *Stana* and *Udara* in *Sthoulya* is reduced by *Rookshana* therapy especially with *Udvartana* and internal *Rooksha Pana Anna* and

Bheshaja in more quantity from the depended part of the body.

Effect on Atiksudha:

- 1. R.S Group provided significant relief of 69.23% in this symptom of *Atiksudha* while it was 43.75% in case of S Group with statistically highly significant values for both the treatments (P<0.001).
- 2. Kshudhadhikya in Sthoulya is an outcome of aggravated Vayu which stimulates the Agni. So, the reduction in Kshudhadhikya just after Shodhana may be due to elimination of Pitta and control of Vayu causing Agni to be lowered for time being. As Shodhana is a Apatarpana line of treatment in which Agni is diminished for time being clearly indicates that the patients in R.S Group was far better in providing relief in Kshudhadhikya than S.Group

Effect on Ati Trishna:

- 1. R.S Group provided relief of 81.81% in *AtiTrishna*, while it was 50% in case of S. Group with statistically highly significant values for both the treatments (P<0.001)
- 2. Ati Trishna occurs due to Pitta Vriddhi and Udaka Kshaya which may be relieved by Tikta, Madhura and Kashaya Rasa of the drugs used for Bahya and Abhyantara Rookshana which further pacify Pitta Dosha or may be due to the Trishna Nigraha action of Yava and Takra. So, the combined effects of Rookshana with Shodhana clear the Ati Trishna lakshana in Sthoulya

Effect on Nidradikya:

- **1.** R.S Group provided relief of 56.66% in *Nidradikya*, while it was 41.37% in case of S Group with statistically highly significant values for both the treatments (P<0.001).
- 2. AtiNidrais mainly due to the Prakopa of Kaphadosha and Medodhathu, where Shodhana expel vitiated Kapha Dosha to a larger extent. Along with that the properties of the Rookshana Dravyas like Katu, Kashaya, Tikta Rasas and Ushna Veerya by the rubbing action it promotes the Vilayana of Kaphaa nd Medas, which further

increase the effect of treatment and provide better relief in symptoms.

Effect on Daurgandya:

- 1. The effect of treatment on *Daurgandya* in both the group was statistically highly significant (P<0.001) were the percentage relief in symptom was comparatively better in R.S Group which was 51.61% while in S Group it was 37.83%.
- 2. Daurgandha is mainly due to excessive Sweda along with vitiated Medas and Sveda is also considered as Mala of Meda. So due the Medovilayana property of Rooksana Dravyas along with Shodhana reduce the excessive vitiated Medas, which further result in the marked reduction in Sharira Daurgandya.

Effect on Gourava

- 1. The effect of treatment on *Gourava* in both the group was statistically highly significant (P<0.001) were the percentage relief in symptom was comparatively better in R.S Group which was 56.81% while in S Group it was 47.05%.
- 2. Gourava is mainly due to excessive Kapha Dosha and Medo Dhathu. Due to the effect of treatment in both the groups Gourava was reduced markedly. In R.S Group improvement was more because of the action of Rookshana prior to Shodhana which have Kaphahara and Medovilayana properties which reduce the Gourava and by which it enhances the enthusiasm in day today activities.

Effect on Body Weight and BMI:

- 1. The effect of treatment on body weight and BMI in both the groups was statistically highly significant (P<0.001) individually.
- 2. If we see the percentage relief of body weight in R. S Group and S Group, it was 6.91% & 2.68% respectively were reduction of BMI was 7.51% & 2.71% respectively.
- 3. Further analysis showed that *Rookshana* alone provided relief on body weight by 2.99% and BMI by 2.98% with statistically highly significant (P<0.001), which was near to the relief provided by the S. Group.

4. Majority of *Udvartana Yoga, Triphala Kashaya, Yava* and *Takra* are having the properties of *Laghu, Rooksha, Tikshna Guna, Tikta, Kashaya, Katu Rasa* and *Katu Vipaka, Kaphagna* and *Medhohara* properties along with proven hypolipidaemic effect might have decreased the Body mass index and weight.

Effect on Skinfold Thickness of Biceps, Triceps Subscapular Abdomen and Thigh:

- 1. The percentage relief of skinfold thickness of triceps, biceps, subscapular, abdomen and thigh in R.S Group was 0.40% individually except in abdomen were the relief was 0.69% which is statistically highly significant (P<0.001) while in S. Group it was 0.012%, 0.064%, 0.038%, 0.16% and 0.38% respectively which was statistically significant (P<0.01).
- 2. *Rookshana* therapy alone provided significant relief of 0.30%, 0.38%, 0.38%, 0.60% and 0.38%, in the above parameters respectively with statistically highly significant (P<0.001), which was more than half of the reduction done by S. Group.
- 3. By seeing this percentage of changes in skinfold thickness of all the above, we can say that *Rookshana Chikitsa* was better to reduce Subcutaneous fat (Skinfold thickness). The subcutaneous fat was scraped markedly by the rubbing action of *Udvartana* therapy.

Effect on Circumference of Chest, Abdomen, Buttock, Mid-Thigh and Mid-Arm

- 1. The percentage relief in all the above parameters in R.S Group was 1.80%, 3.32%, 1.50%, 2.70% and 1.91% respectively which was statistically highly significant (P<0.001).
- 2. While in S Group the effect on circumference was 0.24% with statistically significant (P<0.01) in chest region, 0.9% with statistically highly significant (P<0.001) in abdomen region, 0.24% which was statistically significant (P<0.05) in buttocks, 0.80% which was statistically significant value (P<0.01) in mid-thigh region & 0.24%

- which was statistically significant (P<0.01) in mid arm region.
- 3. *Rookshana* therapy alone provided significant relief of 0.90%, 2.45%, 1.10%, 2.16%, 1.66% in the above parameters respectively with statistically highly significant (P<0.001), which was more than half of the reduction done by S. Group.

By seeing the percentage relief in above parameters, we can say that *Rookshana Chikitsa* was better in the reduction of Subcutaneous fat mainly due to the rubbing action of *Udvartana* therapy. This proved that the drugs used for *Rookshana* have highly potent action in *Medo Vilayana*, *Shoshana*, *Ama Pachana* and *Kleda Nashana*. Thus, by the *Rookshana* therapy the excess vitiated *Meda* which was deposited in the abdominal wall, *Vapa* as well as *Sphik* and *Stana* can be easily reduced by *Rookshana* therapy.

Total Effect: Rookshana Poorvaka Vamana provided better relief in Chala Stana (37.93%), Chala Udara (62.79%), Chala Sphik (38.23%), Atiksudha (69.23%),

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Atitrishna (56.66%),(81.81%),Nidradikya Dourgandya (51.61%),Gourava (56.81%),Bodyweight (6.91%), BMI (7.51%), Skinfold thickness of Biceps (0.40%), Triceps (0.40%), Subscapular (0.40%), Abdomen (0.69%) and Thigh (0.40%), Circumference of Chest (1.80%), Abdomen (2.11%), Buttock (1.50%), Mid-Thigh (2.70%) and Mid-Arm (1.91%).

Sneha Poorvaka Vamana provided relief in Chala Stana (11.11%), Chala Udara (32.43%), Chala Sphik (17.64%), Atiksudha (43.75%), Atitrishna (50%), Nidradikya (41.37%), Dourgandya (37.83%), Gourava (47.05%), Bodyweight (2.68%), BMI (2.71%), Skinfold thickness of Biceps(0.01%), Triceps (0.064%), Subscapular(0.38%), Abdomen (0.16%) and Thigh (0.38%), Circumference of Chest (0.24%), Abdomen (2.11%), Buttock (0.24%), Mid-Thigh (0.81%) and Mid-Arm (0.24%).

On the basis of the above results it can be stated that overall effect of *Rookshana Poorvaka Vamana* was far better in comparison to *Sneha PoorvakaVamana*

Table 1: Comparative effect of *Rookshana* alone and S.Group

Parameters	Mean Difference		% of Relief		T Value	P Value
	Rookshana	S Group	Rookshana	S Group		
ChalaStana	0.467	0.2	24.13%	11.11%	1.56	>0.05
Chala Udara	0.933	0.533	32.55%	32.43%	2.683	< 0.05
ChalaSphik	0.733	0.267	32.35%	17.64%	2.792	< 0.01
Atiksudha	0.533	0.6	30.76%	43.75%	-0.316	>0.05
Atitrishna	0.867	0.667	39.39%	50%	0.963	>0.05
Nidradikya	0.467	0.6	23.33%	41.37%	-0.714	>0.05
Dourgandya	0.6	0.467	29.03%	37.83%	0.714	>0.05
Gourava	0.733	0.8	25.00%	47.05%	-0.357	>0.05
Body Weight kg	2.507	1.033	2.99%	2.68%	7.774	< 0.001
BMI	0.855	0.352	2.98%	2.71%	6.035	< 0.001
Skinfold thickness of Biceps	0.00839	0.000033	0.30%	0.01%	24.653	< 0.001
Skinfold thickness of Triceps	0.0109	0.00157	0.38%	0.06%	6.75	< 0.001
Skinfold thickness of Scapular	0.008	0.000573	0.38%	0.38%	261.537	< 0.001
Skin fold thickness of Abdomen	0.00747	0.00249	0.60%	0.16%	30.394	< 0.001
Skinfold thickness of Thigh	0.008	0.000573	0.38%	0.04%	261.537	< 0.001
Chest Circumference	0.943	0.313	0.90%	0.24%	6.745	< 0.001
Abdomen Circumference	1.101	0.48	2.45%	0.90%	10.884	< 0.001
Buttock Circumference	1.205	0.108	1.10%	0.24%	142.726	< 0.001
Mid-Thigh Circumference	1.403	0.437	2.16%	0.80%	3.575	< 0.01
Mid-Arm Circumference	0.459	0.006	1.66%	0.24%	13.342	< 0.001

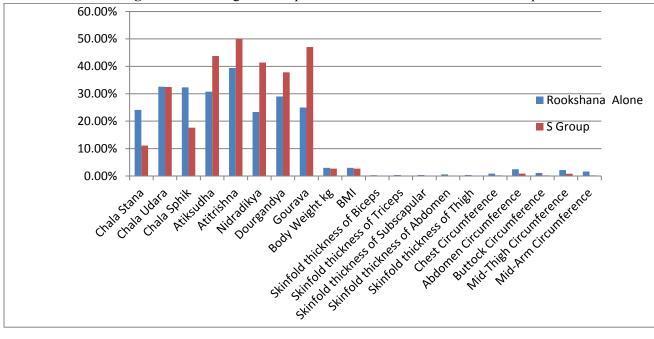


Figure 1: Percentage of Comparison on Rookshana alone and S.Group

Table 2: Comparative effect of R.S Group and S Group

Parameters	Mean Difference		% of Relief		T Value	P Value
	Group RS	Group S	Group RS	Group S		
ChalaStana	0.667	0.2	37.93%	11.11%	2.432	>0.05
Chala Udara	1.4	0.533	62.79%	32.43%	4.638	< 0.001
ChalaSphik	0.733	0.267	38.23%	17.64%	2.792	< 0.01
Atiksudha	0.8	0.6	69.23%	43.75%	0.837	>0.05
Atitrishna	1.533	0.667	81.81%	50%	3.236	< 0.01
Nidradikya	1.133	0.6	56.66%	41.37%	2.117	< 0.01
Dourgandya	0.733	0.467	51.61%	37.83%	1.313	>0.05
Gourava	1.2	0.8	56.81%	47.05%	1.507	>0.05
Body Weight kg	3.48	1.033	6.91%	2.68%	11.995	< 0.001
BMI	1.206	0.352	7.51%	2.71%	9.428	< 0.001
Skinfold thickness of Biceps	0.0112	33	0.40%	0.01%	11.854	< 0.001
Skinfold thickness of Triceps	0.0118	0.00157	0.40%	0.06%	6.303	< 0.001
Skinfoldthicknessof Subscapular	0.0081	0.000573	0.40%	0.38%	170.48	< 0.001
Skinfold thicknessof Abdomen	0.00878	0.00249	0.29%	0.16%	34.499	< 0.001
Skinfold thickness of Thigh	0.0081	0.000573	0.40%	0.04%	170.48	< 0.001
Chest Circumference	1.256	0.313	1.80%	0.24%	10.237	< 0.001
Abdomen Circumference	1.688	0.48	3.32%	0.90%	14.999	< 0.001
Buttock Circumference	1.337	0.108	1.50%	0.24%	74.925	< 0.001
Mid-Thigh Circumference	1.587	0.437	2.70%	0.80%	4.254	< 0.001
Mid-Arm Circumference	0.467	0.006	1.91%	0.24%	13.821	< 0.001

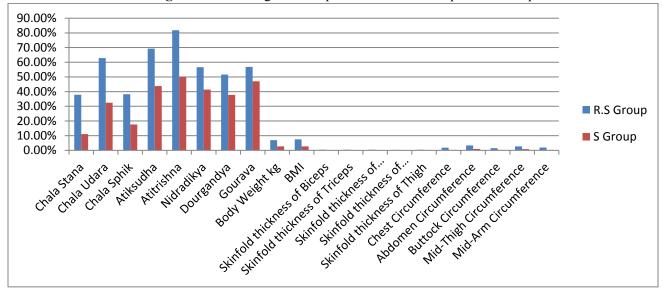


Figure 2: Percentage of Comparison on R S. Group and S. Group

CONCLUSION

The results of this study clearly indicate the importance of *RookshanaPoorvaka Vamana* in the management of *Sthoulya*. *Rookshana* alone has provided better relief to the patients of *Sthoulya*, which was nearly equal to that of *Sneha Poorvaka Vamana*, if cost effective and time consumption were taken into consideration. The relief provided by *Rookshana* was further increased by the action of *Vamana*. Therefore, on the basis of the results of this study it may be concluded that to get the better effect in *Shodhana* in the case of *Sthoulya*, *Rookshana Poorvaka Snehapana* should be preferred. Definitely after *Shodhana*, if the patients are continued with *Samana Chikitsa* along with Yoga and exercise, then it will provide better relief.

REFERENCES

doi: 10.46607/iamj.08062020

- Agnivesha, Charka Samhita with Ayurveda Deepika commentary of Chakrapani Datta edited VaidyaJadaviji Trikamji Acharya edited, published by Chaukamba Surabharati Prakashan Varanasi, Reprint 2008. Sutra Sthana 23/3-7 Pg. No:122.
- Agnivesha, Charka Samhita with Ayurveda Deepika commentary of Chakrapani Datta edited VaidyaJadaviji Trikamji Acharya edited, published by Chaukamba Surabharati Prakashan Varanasi, Reprint 2008. Sutra Sthana 28/15 Pg No179.

- 3. Agnivesha, Charka Samhita with Ayurveda Deepika commentary of Chakrapani Datta edited Vaidya Jadaviji Trikamji Acharya edited, published by Chaukamba Surabharati Prakashan Varanasi, Reprint 2008. Sutra sthana 20/17 Pg No: 115.
- Agnivesha, Charka Samhita with Ayurveda Deepika commentary of Chakrapani Datta edited VaidyaJadaviji Trikamji Acharya edited, published by Chaukamba Surabharati Prakashan Varanasi, Reprint 2008. Sutra Sthana 21/3-28 Pg No:116-117.
- Vagbhata, Astanga Hridaya with Sarvangasundaracommentary of ArunaDatta, Ayurvediya Darshana Hemadri edited Bhishagacharya Harisastri Pardakara Vaidya, Reprint 2005 Sutra Sthana 16/37-38 Pg No 251.
- Susruta, Susruta Samhita with Nibandhasangraha commentary of Dalhana Acharyaedited Vaidya Jadaviji Trikamji Acharya Published by Chaukamba Surabharati Prakashan Varanasi, Reprint 2008 Chikhitsa Sthana 33/18 Pg No 517.

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