ABSTRACT
Acharya Charaka and Acharya Vagbhatta has illustrated that Krishata is better than Sthaulya because when Sthula purusha affected by disease suffers more due to it as compare to Karshya. According to the modern science, obesity precipitates the disease like Hypertension, Osteoarthritis, Coronary heart disease, Diabetes mellitus etc. Acharya Charaka included Atisthula Purusha under the eightverities of impediments, which are designated as Nindita Purusha. In the Sthaulya etiological factors mainly vitiate the Meda-Kapha. This vitiated Meda obstruct the path of Vata, which results in to provocation of Vata. In the Samprapti of sthaulya two factors are of prime importance, Tikshna Jatharagni and Medodhatvagni - mandya. Irrationality between two levels of Agni makes the disease Krichha Shadhya, but Panchkarma therapy can give better solution for this problem. In present study, Lekhana Basti and Virechana Karma were selected for the management of Sthaulya. The patients were treated under two therapeutic groups - Virechana + Triphala Guggulu group, Lekhana Basti + Triphala Guggulu. Basti provided better relief in almost all the parameters than Virechana group.

Key words: Sthaulya, Virechana, Lekhana Basti, Triphala Guggulu.

INTRODUCTION
Sthaulya is blessing of modern age of machine and materialism, which occurs due to lack of physical activities, increase intake of food, change in dietic habits. So, it is mentioned among Santarpana janita Vyadhi in Ayurvedic text. Though it is Santarpana janita Vyadhi only Aptarpana Chikitsa is not sufficient for the management of Sthaulya. In Sthaulya etiological factors mainly vitiate Meda – Kapha, and Vata get Avarita by excessive Meda. Thus if we used only Aptarpaka Dravya it increases the vitiated Vata. Therefore, treatment should be planed considering vitiated Vata, Meda and Kapha. It is a difficult task to reduce Meda and to pacify the Samana Vata at same time. Panchkarma can provide better solution to this problem. Ayurvedic classics have mentioned Lekhana Basti and Virechana Karma among the Shodhana Chikitsa for Sthaulya. Lekhana Basti by virtue of its Lekhana property reduces Meda and simultaneously pacifies the Vata by affecting its seat Pakvasaya, so here Lekhana Basti is selected for the treatment of Sthaulya. Virechana is also mentioned in the treatment of Santarpana Janita Vyadhi. So here attempt has done to evaluate the role of Virechana as well as Lekhana Basti in the Sthaulya and to compare the efficacy of both the Shodhana procedure. This disease is very stubborn in nature, keeping all this in mind, clinical study was carried out with following aims & objectives.

AIMS AND OBJECTS
1. To study the disease Sthaulya.
2. To evaluate the efficacy of Virechana Karma in the management of Sthaulya.
3. To evaluate the efficacy of Lekhana Basti in the management of Sthaulya.
4. To compare the efficacy of Virechana Karma and Lekhana Basti in the management of Sthaulya.

MATERIALS AND METHODS:
36 patients of Sthaulya attending the O.P.D, I.P.D of department of Kayachikitsa, I.P.G.T & R.A.
Gujarat Ayurveda University, Jamnagar-Gujarat were selected according to eligibility criteria.

**INCLUSION CRITERIA:**
1. The patients whose age >15 and <60 years were selected.
2. The patients having clinical signs and symptoms of Sthaulya.
3. Standard height – Weight chart was also considered.
4. B.M.I criteria were also followed for selection of patient.

**EXCLUSION CRITERIA:**
1. Patients below the age of 15 years and above 60 years.
2. Patients with Hypothyroidism.
4. Patients with severe Hypertension.
5. Patients with evidence of Renal, Hepatic and Cardiac involvement.
6. Patients with Diabetes mellitus.

**Design of Groups**
The selected patients were randomly divided into two groups.

**Group-A:** Virechana+Triphala Gugglu. In Virechana group; Tila taila was used as Abhayantara Snehapana because of its Kapha-Vatahara and Medohara property. Triphala, Katuki and Icchabhedirasa were used as a Virechaka Dravya.

**Group-B:** Lekhana Basti+Triphala Guggulu. Drugs of Lekhana Basti were Agnimantha, Tuttha, Kasisa, Shilajita, Hingu, Yavakshara, Saindhava, Madhu, Till taila, and Gomutra. Most of the drugs were having Kattu-Tikta-Kashaya Rasa, Laghu-Tikshna-Sukshma Guna, Ushna Virya, Katu Vipaka and Kapha-Vatahara property.

As a Shamana drug Triphala Guggulu was used in both the groups which contain Triphala, Pippali and Guggulu.

In group-A; Virechana Karma was performed with classical method. In group-B; Total 15 Lekhana Basti was given alternate day for duration of one month. In both the group Triphala Gugglu two grams three times with warm water with the instruction of to take before meal for 21 days was given as a Shamana Therapy. In Virechana Group it was given after Sansarjana karma and In Basti group next day after the completion of the Basti. Also strict diet control and exercise were kept as uniform control in both the groups.

**RESULTS AND DISCUSSIONS**

**OBSERVATIONS**
Majority of the patients 88.88 % were female, Maximum 91.33 % were having Kapha predominant prakriti either related with Vata or Pitta. Maximum 50.00 % patients were having dietetic habit of Adhyasana, 58.33 % were having Pravara Abhyavahra Shakti and 66.66 % patients were having positive family history. Among the female patient 40.62 %, were reported history of irregular menses followed by 28.12 % menopausal history. Maximum 50.00 % patients were consuming excess 300-600 Kcal./day. Atibhojana 63.88 %, Guru Ahara 77.77 %, Ati Madhura Ahara 66.66 % was reported as Aharatmaka Nidana. Maximum 66.66 % patients reported Harshanityatvat as Manashika Nidana while 66.66 % patients were reported Divaswap as Viharatmaka Nidana. 100 % patients reported Bharavriddhi, 72.22 % patients reported KShudraswasa and Atikshudha as chief complain. 88.88 % patients were reported Alasya and 66.66 % Gatrasada as associated complain. 100 % patients reported Kapha Dushti as well as Medovaha and Rasavaha, Srotodushti. Majority 82.35 % patients required 4 – 5 days for Sneha, maximum 47.05 % patients reported Madhyama Vega, 73.68 % patients showed Basti Retention time between 10 -15 minutes.

**EFFECT OF VIRECHANA + TRIPHALA GUGGULU GROUP:**
In this group, total 17 patients were registered and 5 patients had left the treatment. Effect of Virechana + Triphla Guggulu on 12 patients is being presented here. In this Group relief in Alsya was 64.65 %, Nidradhkya 60.60 %, Atipipasa 60.09 %, Atiksudha 55.33 % and all these result were statistically highly significant (P <0.001). Effect on Kshudraswasa was 75.8 %, Swedadhikya was 64.53 %, Daurbalyata was 56.34 % ad all this result were statistically significant (P <0.001). Relief observed in Gatrasada Daurgandhya, Snigdhangta, Angchaltva was 56.84 %, 45.05 %, 41.00 %, 24.15 % respectively and all these result were also statistically significant (P <0.05). Average 4.02% reduction was observed (p<0.001) Relief in Pitta Dushti Lakshana was 66.66 %, Kapha Dushti Lakshana was 59.00 % at statistically highly significant level (P<0.001). Improvement in Vata Dushti Lakshana was 58.86 % at statistically significant level (P<0.01) Relief in Medovaha Srotodushti, Rasavaha Srotodushti, Udakvaha Srotodushti were 55.70 %, 65.60 %, 67.00 % respectively. All these results were statistically highly significant (P <0.001), Improvement in

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Swedavaha Srotodushti was 67.00 % at statistically significant level (P<0.01).

**EFFECT OF LEKAHNA BASTI + TRIPHALA GUGGULU GROUP**

In this group total 19 patients were registered and 6 patients had left the treatment. Effect of Lekhana Basti + Triphala Guggulon 13 patients is presented here. 86.93 % relief in Nidradhikya, 85.71 % in Kshudraswasas, 84.03 %, in Alasya, 80.74 % in Gatrasada, 63.90 % in Atikshudha, 72.46 % in Swedadhikya was observed which was statistically highly significant (P<0.001). Improvement in Atipipasa, Snigdhangta, Daurbalya was 50.00 %, 82.14 %, 68.29 % respectively. at statistically significant level (P <0.01). The significant result was observed 56.60 % in Daurandhya and 28.15 % in Angachltva (P < 0.05). Improvement in Kapha Dushti Lakshna 73.94 %, in Vata Dushti Lakshna 65.34 %, observed. Both the results were statistically highly significant (P<0.001) while improvement in Pitta Dushti Lakshna was 58.26 % result was statistically significant (P < 0.01). Improvement observed in Medovaha Sroto Dushti was 69.56 %, Rasavaha Sroto Dushti 65.07 %, Swedavaha Sroto Dushti 72.46 % at statistically highly significant level(P<0.001). 50.00 % relief was observed in Udana Dushti Sroto Dushti at statistically significant level (P<0.01).

**EFFECT OF THERAPIES ON BODY WEIGHT, B.M.I, CIRCUMFERENCE AND SKIN FOLD THICKNESS:**

1. **Weight:** Reduction in body weight was 3.41 % in Virechana group while 6.30 % in Basti group at statistically highly significant level.
2. **B.M.I:** In B.M.I 3.83 % reduction was observed in Virechana group while 6.02 % in Basti group at statistically highly significant level. Hence, approximately two times more reduction was observed in body weight in B.M.I in Basti group than Virechana group.
3. **Circumference:** In Virechana group decrease in various body circumference i.e. Chest, Abdomen, Hip and Mid thigh, Mid calf and Mid arm was 2.60 %, 3.81 %, 2.48 %, 4.59 %, 3.09 %, 3.78 %, respectively circumference. All the result was statistically highly significant (P <0.001), except Mid calf (P <0.01), average 3.39 % reduction was observed in the measurement of different body circumference. In Basti group 2.48 %, 6.51 %, 3.66 %, 4.82 %, 3.52 %, 4.51 % reduction was observed in Chest, Abdomen, Hip, Mid thigh, Mid calf and Mid Arm circumference all the result were statically highly significant (P <0.01) except Mid calf (P < 0.01) average 4.25 % reduction was observed. Thus Basti group provided better relief in reduction of different circumference than Virechana group.

4. **Skinfold Thickness:** In Virechana group 3.96 %, 4.51 %, 3.76 %, 3.86 % reduction was found in biceps, Triceps, scapular and thigh skin fold respectively. All the result was highly significant. Average 4.02% reduction was observed (p<0.001) In Basti group reduction in skin fold thickness showed highly significant result 4.34 %, 4.85 %, 4.54 %, 5.38 % in Biceps, Triceps, Scapular and Thigh Skinfold respectively average 4.77 % result was seen. All the result were statistically highly significant (P <0.001). Hence, Basti group showed better results in reduction of Skinfold thickness than Virechana group.

Reduction in body weight, B.M.I, Circumference, Skin fold thickness depends upon the proportion of fat. Fat is 1.5 times heavier than lean body mass and occupies more area in the body. So when the proportion of fat increases simultaneously body weight, body circumference and Skin fold thickness also increases. When it reduces all this parameters also decreases. Virechana karma corrects the Medodhatvagnimandya and checks the process of Medovriddhi but Basti Dravya by its Lekhana Karma reduced Meda more frequently than Virechana process. So here, good results were obtained in Basti group.

**EFFECT OF THERAPIES ON BIOCHEMICAL PARAMETERS:**

1. **S.Cholesterol:** In Virechana 4.95 % reduction was observed in S.Cholesterol, while 9.17 % in Basti group result were statistically not significant (P> 0.05). But percentage relief was more in Basti group.
2. **S.Triglyceride:** 3.93 % and 6.96 % reduction was observed in S.Triglyceride in Virechana group and Basti group respectively result were statistically insignificant (P>0.05). However percentage relief was more in Basti group.
3. **S.VLDL:** Reduction in S.VLDL was 16.13 % in Virechana group while 5.36 % in Basti group result were statistically insignificant. But percentage relief was more in Virechana group.
4. **S. LDL:** Reduction in S.LDL was 4.15 % in Virechana group (P>0.05) while 36.36 % in Basti group (P<0.01). Thus, Basti group provided better result in reduction of S.LDL.
5. **S.HDL:** In Virechana group S.HDL level was decreased up to 17.62 % (P>0.05) while Basti group it is increased 82.92 % at statistically significant level (P<0.001).
significant level (P<0.05). Hence, Basti group showed better result than Virechana group. Reduction in S. cholesterol and S. triglyceride level was approximately two times more than Virechana group. Reduction in S. LDL level and increase in S. HDL level shows far better result than Virechana group and this result were statistically significant.

OVER ALL EFFECT OF THERAPY
In the present study, total assessment of the therapy was done based on relief in the signs and symptoms as well as objective criteria Weight, B.M.I, Skin fold thickness, Body circumference and Biochemical parameters.

In Virechana + Triphala Guggulu Group:
Total 12 patients were given treatment, out of them 41.66 % patients were moderately improved as well as showed minor improvement and 16.66 % patients remained unchanged.

In Lekhana Basti + Triphala Guggulu Group:
Total 13 patients were given treatment, out of them 23.07 % patients were markly improved, 53.84 % patients showed moderate improvement, 15.38 % showed minor improvement and 7.69 % patients remain unchanged. Basti provided better relief in almost all the parameters than Virechana group moreover it showed better result in overall effect of therapy.

Probable reasons for better result of the Lekhana Basti:
1. It may be due to change in route of administration.
2. Basti not only eliminates Dosha from the body but through the colon (Pakvasaya) drug is absorbed and reaches up to the micro channels of the body, which performs the action of Samprapti Vighatana at cellular level. It is also supported by our classics. (Su. Chi. 35 : 26)

CONCLUSION
Sthaulya is a Dushya Dominant Vyadhi. There is an involvement of all the three Doshas in Sthaulya but the vitiation of Kapha-Vata and Meda of prime importance. Etiological factor mainly Vitiate Kapha-Meda. This vitiated Meda obstruct the path of Vata and causes its Avarana which results in to provocation of Vata. Thus remaining in the Kostha Vata causes Atikshudha, which increases gravity of the disease and make the Sthaulya Kritiehsadhaya. Due to obstruction by Meda Vyana Vayu could not transport nutrient to other Dhatu so Medadhatus is increased and Uttardhatu decreased. So treatment modality should be planed considering vitiated Meda, Kapha and Vata. Lekhana Basti and Virechana Karma are amongst them. Sedentary life, lack of exercise, faulty food habits, and urbanization precipitate the disease. Genetic predisposition, Kapha predominant Prakriti increases the prevalence of Sthaulya. Females are more prone to obesity due to feminine factor like menopause and aggravating factors like delivery, I.U.C.D., oral contraceptive pills, miscarriage. Basti provided better result in almost all the parameters because it eliminates Doshas from the body and simultaneously absorbed drug perform their action of Samprapti Vighatana at cellular level.

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