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Efficacy of Abhyantar Snehapan and Anuvasan Basti in The Management of Sthaulya

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ABSTRACT

Obesity (*Sthaulya*) is a chronic disorder characterized by excessive body fat accumulation, predisposing individuals to cardiovascular disease, diabetes, and other comorbidities. In *Ayurveda, Sthaulya* is described as a *Santarpanajanya* (overnutrition) condition involving excess *Meda* (fat) and is managed with *Apatarpana* (de-nourishment) therapies and *Panchakarma* detoxification. This study evaluates the efficacy of *Abhyantar Snehapan* (internal oleation with medicated ghee) versus *Anuvasan Basti* (medicated oil enema used as *Sneha Pravicharana*, an alternative oleation method) in the management of obesity, in patients who all subsequently underwent *Virechana* (therapeutic purgation). A total of 10 obese patients were divided into two groups of 5 each. Group A received internal *Snehapan* with *Go Ghrita* (cow ghee) for 7 days, while Group B received *Sneha Pravicharana* by daily *Anuvasana Basti* with *Bruhat Saindhavadi Taila* for 7 days. All patients then underwent a classical *Virechana* procedure to eliminate vitiated *Doshas*. Outcomes, including body weight and body mass index (BMI) were measured before treatment and after completion of the therapy. Results: Both groups showed reductions in weight and BMI, but Group A (internal *Snehapan*) demonstrated a significantly greater mean weight loss (≈3.66 kg, ~4.5%) compared to Group B (≈1.88 kg, ~2.3%) ($p<0.01$). Group A's BMI decreased from 31.7 to 30.3 (mean), whereas Group B's BMI decreased from 32.1 to 31.4. No severe adverse effects were observed in either group. Discussion: Internal oleation was found to enhance the efficacy of *Virechana* by achieving better systemic lipid mobilization and elimination, resulting in more pronounced weight reduction, while *Anuvasana Basti* provided moderate improvements. These findings align with classical Ayurvedic principles that emphasize the importance of adequate *Snehana* for successful *Shodhana* outcomes. *Anuvasana Basti*, though less potent in short-term weight loss, offers a viable alternative for patients unable to tolerate oral intake of *ghee*, and it may be safer or more practical in certain clinical situations. Conclusion: *Abhyantar Snehapan* combined with *Virechana* therapy was more effective than *Anuvasan Basti* (*Sneha Pravicharana*) combined with *Virechana* in reducing weight and BMI in obese patients under the conditions of this study. Proper internal oleation appears to facilitate a more thorough detoxification in the management of *Sthaulya*. Nevertheless, *Anuvasana Basti* still conferred meaningful benefits and can serve as an alternative *Sneha* therapy in obesity management, especially for individuals contraindicated or intolerant to oral ghee intake. Further large-scale studies are recommended to confirm these results and to explore long-term outcomes, including metabolic parameters.

Keywords: *Obesity, Sthaulya, Abhyantara Snehana, Anuvasana Basti, Virechana, Panchakarma, Ayurvedic weight management*

1. INTRODUCTION

Figure 1: A traditional analog weighing scale (representative of the baseline measurement of obesity). Over 2.5 billion adults globally were overweight in 2022, with 890 million classified as obese. Obesity is typically defined by a body-mass index (BMI) ≥30 kg/m², a condition that markedly elevates the risk of cardiovascular disease, type 2 diabetes, and other complications.

Obesity, a modern pandemic, has nearly tripled in prevalence worldwide over the past half-century. The World Health Organization estimates that as of 2022 about 43% of adults were overweight and 16% were obese. In clinical terms, obesity is defined as excessive adipose tissue accumulation to the extent it adversely affects health; operationally, this corresponds to BMI ≥30 (kg/m²) for adults. Conventional management of obesity focuses on calorie-restricted diets, exercise, and pharmacotherapy or bariatric surgery in severe cases. However, long-term weight loss maintenance remains challenging, prompting interest in complementary approaches.

Ayurvedic Perspective: In *Ayurveda*, obesity is described under the name *Sthaulya* or *Medoroga*, attributed to an excess of *Meda Dhatu* (adipose tissue) in the body. Classical texts define *Sthaulya* as the excessive accumulation of *Meda* (fat) and *Mamsa* (muscle/flesh), leading to a pendulous appearance of the abdomen, hips, and breasts. It is categorized as a *Santarpana-janya Vikara* (disease due to over-nutrition) and specifically listed by *Acharya Charaka* among the "*Ashtau Nindita Purusha*" – the eight undesirable body constitutions. *Charaka* observed that an *Ati-sthaulya* (morbidly obese) individual tends to suffer from diminished longevity, reduced vitality, and a host of health issues. *Sushruta* and other *Acharyas* similarly warned that extreme corpulence predisposes to diseases and complications, emphasizing the need for its management. Importantly, the classical *Ayurvedic* view of obesity encompasses not only excess weight but also a state of impaired metabolism (*Medo-dhatvagnimandya*) and blocked channels (*Srotorodha*) that further aggravate the condition. These descriptions resonate with modern findings linking visceral fat to metabolic syndrome. Obesity in *Ayurveda* is thus recognized as a *Santarpana* (overnutrition) disorder resulting from a *Kapha-Meda* predominance with associated *Vata* vitiation in the channels. The consequences of *Sthaulya* are severe: ancient texts noted diminished life span, low energy, infertility, and proclivity to other illnesses in the obese, which aligns with today's identification of obesity as a risk factor for hypertension, coronary artery disease, diabetes, osteoarthritis, and certain cancers. Obesity's impact on quality of life and healthcare costs makes it a high-priority health concern globally and in India.

***Ayurvedic* Management of *Sthaulya*:** *Ayurveda* advocates a holistic approach combining *Shodhana* (purification therapies) and *Shamana* (pacifying treatments) for obesity. Lifestyle modifications (dietary regulation and exercise) are fundamental,

akin to modern recommendations. In addition, a number of herbal formulations (e.g. *Triphala*, *Guggulu*, *Pippali*) are prescribed for their *Lekhana* (scraping/reducing) and *Medohara* (fat-metabolizing) properties. What distinctly sets Ayurveda apart is the use of *Panchakarma* – five specialized detoxification therapies – to tackle obesity at its root. Classical sources note that simple dietary restriction may not suffice if deep-seated metabolic imbalances persist; elimination of vitiated *Doshas* is often necessary. Among the *Panchakarma* procedures, *Virechana* (therapeutic purgation) is prominently indicated for *Medoroga* (obesity) as it targets excess *Kapha* and *Pitta Dosha* in the gastrointestinal tract and liver, which are key in fat metabolism. *Basti* (medicated enema) is another crucial therapy, traditionally considered *Ardha-chikitsa* (half of the entire treatment) for *Vata* disorders, but also formulated in special ways to reduce fat (e.g. *Lekhana Basti*).

Ayurvedic literature and research support the efficacy of these therapies in obesity management. Sharma and Adiga (2021) note that a combination of internal medicine and *Shodhana* procedures (*Vamana, Virechana, Basti, Udvartana,* etc.) can achieve significant weight reduction without adverse side effects. Shelake *et al.* (2020) provide a comprehensive review of *Sthaulya* management in *Ayurveda*, highlighting classical formulations and *Panchakarma* as effective interventions. Murthy (2018) likewise emphasized that obesity (*Medoroga*) can be successfully tackled through Ayurvedic detox therapies, calling it a "lifestyle disorder" that *Ayurveda* addresses by removing *Ama* (toxins) and balancing metabolism. Thus, there is both traditional wisdom and growing scholarly evidence to validate the *Ayurvedic* approach to obesity.

Rationale for *Snehapan* and *Basti*: In *Ayurvedic* clinical practice, an effective *Virechana* (purgation) is predicated upon proper *Purva-karma* (preparatory measures) – chiefly *Snehana* (oleation) and *Swedana* (sudation). *Snehana* involves saturating the body with lipid-based fluids (oils or ghee) to loosen and mobilize *Doshic* toxins from peripheral tissues towards the gastrointestinal tract. This internal lubrication softens the body's channels and concentrated *Ama*/*Meda*, thereby facilitating their expulsion during the subsequent purification. Classical texts insist on achieving *Samyak Snehana* (signs of proper oleation) before administering *Virechana* for maximal efficacy. Typically, *Abhyantara Snehapana* (oral intake of medicated ghee/oil) over several days is the method of choice for *Snehana*. Ghee processed with specific herbs (*Go Ghrita*) is often preferred in obesity to kindle *Agni* (digestive fire) and emulsify fat deposits. However, not all patients can tolerate drinking large quantities of fat daily – some have aversions, poor palatability, or contraindications such as weak appetite (*Alpa Agni*) and psychological reluctance (*Alpa Sattva*). In such cases, Ayurvedic scholars have described an alternative route of oleation: *Sneha Pravicharana* by *Basti*, i.e. administering oil rectally to achieve systemic oleation effects. *Anuvasana Basti* (oil-based enema) can be given in gradually increasing volumes to similarly produce signs of oleation (like unctuous skin, loosened stools) without the need for oral intake. This approach is considered especially when oral *Snehapan* is not feasible or to shorten the duration of oleation therapy. *Ayurvedic* treatises even advise that in individuals with very *Krura Kostha*, an enema should precede purgation to lubricate and clear the bowels, thereby allowing the purgative to act properly. This is relevant because obese patients often have *vitiated Vata* and channel obstruction by *Meda*, which can manifest as constipation (hard bowel). By administering an oil *Basti* first, the *Srotas* (channels) are moistened and opened, enabling a smoother and more complete *Virechana*.

Despite these references, there is limited direct clinical evidence comparing oral vs. rectal oleation methods in obesity management. All patients require *Virechana* in a classical obesity treatment regimen, but the choice of *Sneha* administration (oral or enema) may influence the outcomes. This study was therefore designed to compare the efficacy of *Abhyantar Snehapan* versus *Anuvasan Basti* (as *Sneha Pravicharana*) in a *Virechana*-based obesity treatment. Specifically, we aimed to evaluate which method of pre-purgation oleation yields better weight reduction and BMI improvement in obese patients. We hypothesized that internal *Snehapan* might provide more systemic oleation and thus greater weight loss, whereas *Anuvasana Basti,* while easier to administer for some patients, might result in a lesser magnitude of change. By objectively assessing these two approaches under similar conditions, we seek to inform and optimize *Ayurvedic* treatment protocols for *Sthaulya*. The findings of this trial are expected to have practical clinical significance, guiding physicians on whether *Anuvasana Basti* can effectively substitute for oral *Snehapan* in obesity management or if the latter remains superior in achieving therapeutic outcomes.

2. MATERIALS AND METHODS

Study Design and Patients: This investigation was conducted as a single-center, parallel-group comparative clinical study. A total of 10 patients diagnosed with *Sthaulya* (obesity) were recruited from the outpatient department of *Panchakarma* of Bharati Vidyapeeth Ayurvedic hospital. All patients provided informed consent. Inclusion criteria were: age 20–50 years, BMI > 25 (overweight or obese class I/II), and fulfillment of classical signs of *Sthaulya* (e.g. pendulous abdomen, excessive fat deposition, *Dourbalya* or easy fatigue). Key exclusion criteria were morbid obesity (BMI > 40) requiring immediate allopathic intervention, severe uncontrolled comorbidities (diabetes, hypertension, and hypothyroidism), pregnancy, or any contraindications to *Panchakarma* (such as active peptic ulcer or debilitating illness). Patients were randomly allocated into two groups (n=5 each), labeled Group A and Group B. Baseline characteristics of both groups are summarized in Table 1. The mean age was ~33 years in both groups (Group A: 33.4±6.5; Group B: 33.8±7.3 years). The gender distribution was 60% female (3 out of 5) in each group. All patients had *Krura Kostha* (tendency toward hard bowel movements) and a

majority (70%) had *Vishama* or *Madhyama Agni* (irregular to moderate digestive power). The *Prakruti* (constitutional type) analysis showed a predominance of *Vata-Kaphaja* individuals (6 out of 10 patients), with the remainder being *Vata-Pittaja* or *Kapha-Pittaja* (2 patients each). Figure 2 illustrates the *Prakruti* distribution in the study cohort.

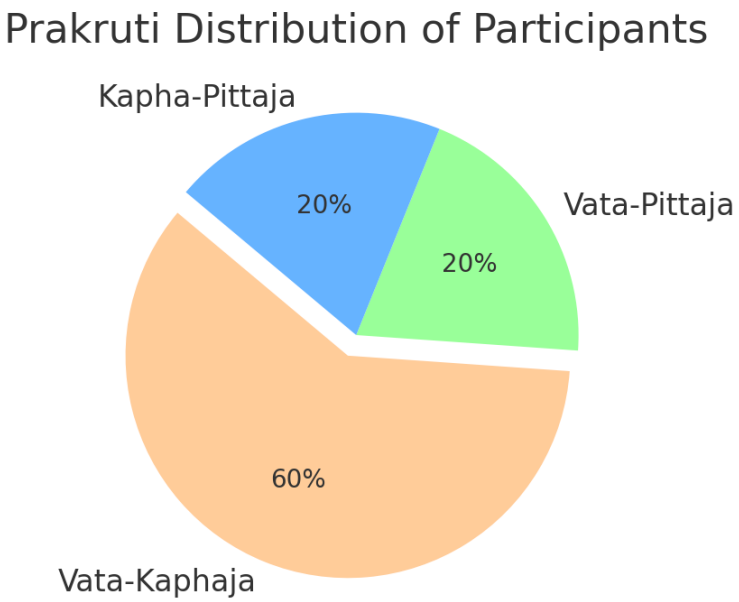

Figure 2: Prakruti (constitutional) distribution of the 10 patients in the study. Vata-Kaphaja Prakruti was most common (60%), followed by Vata-Pittaja (20%) and Kapha-Pittaja (20%). Such dual-dosha constitutions are frequently prone to metabolic disorders like obesity in Ayurvedic doctrine.

Intervention Protocol: All patients underwent a standard preparatory regimen of *Deepana-Pachana* (digestive enkindling and carminative therapy) for 3 days prior to oleation, using herbal formulations to ensure no *Aama* (undigested toxins) remained. After this, Group A received *Abhyantara Snehapan* – internal consumption of medicated ghee while Group B received *Sneha Pravicharana* via *Anuvasana Basti* oil enema as described below. The oleation in both groups was carried out until signs of proper oleation (*Samyak Snigdha Lakshana*) were observed or for a maximum of 7 days. All patients then underwent *Virechana Karma* (therapeutic purgation) on the next day, followed by a post-procedure dietary regimen *(Samsarjana Krama)*. The specifics are as follows:

- Group A (*Internal Snehapan*): Patients in Group A were administered *Go Ghrita* (cow's ghee) internally each morning on an empty stomach. The dosing followed the classical increasing schedule: ~30 ml on Day 1, incrementally rising to ~150 ml by Day 5–7, or until *Samyak Snehana* signs appeared. These signs included oiliness of skin, stool and urine softening, appetite suppression, and absence of dryness. The choice of *Go Ghrita* is supported by *Ayurvedic* texts, as it is said to penetrate subtle channels and purify the body by dissolving excess fat and toxins. Patients were instructed to consume only warm water and light diet later in the day once the *ghee* was digested, to facilitate proper absorption. Sudation (steam or warm blanket) was also given daily after oleation to further dilate channels *(Bahya Snehana and Swedana)*.
- **Group B (*Sneha Pravicharana* via *Basti*):** Patients in Group B received Bruhat Saindhavadi Taila Anuvasana Basti daily. *Bruhat Saindhavadi Taila* is a classical medicated oil indicated for *Vata-Kapha* disorders; it contains *Saindhava* (rock salt) and other ingredients that help in oleation and pacification of *Vata*. An initial dose of ~60 ml of oil was given on Day 1 as a lukewarm enema, administered in the left lateral position. The dose was gently increased up to ~120 ml by Day 5 if tolerated, akin to the *Matra Basti* (daily oil enema) approach. Patients were advised to retain the oil as long as comfortable (at least 30 minutes) to allow absorption through the rectal mucosa. Notably, *Bruhat Saindhavadi Taila* is described in the classical text *Chakradatta* (circa 12th century) as a suitable oil for *Anuvasana Basti* in obesity management. The enema administration was performed under sterile conditions. Daily *Abhyanga* (external oil massage) and mild *Swedana* were also given to Group B patients to aid oleation. By the end of 7 days, Group B patients achieved signs of oleation comparable to Group A (e.g., their skin palpably oily, stools unctuous), confirming that *Sneha Pravicharana* via Basti had successfully imparted systemic oleation.

After the oleation phase, all patients in both groups underwent *Virechana*. A classical purgative formulation was used: *Trivrit Lehya* (paste of *Operculina turpethum* with honey) was given in an individualized dose on the morning of *Virechana* day.

Trivrit (Indian jalap root) is a potent purgative specifically recommended in *Ayurvedic* texts for obesity-associated purgation therapy. The administration of *Virechana* followed standard protocol: patients were given the herbal laxative on an empty stomach and then monitored for the onset of bowel movements. Warm water was provided to sip during the purgation. The number of purgations (*Vegas*) and the nature of expelled material were observed to assess the completeness of *Virechana*. All patients in our study attained *Madhyama Shuddhi* (moderate purification: 15–20 bowel movements), indicating a successful *Virechana* without complications (excessive or inadequate).

Upon completion of purgation, patients underwent *Samsarjana Krama*, a graduated diet regimen, for 3–5 days to restore digestive fire. They started with liquid diets (rice water or thin gruel) and gradually progressed to a normal solid diet by day 5 post-*Virechana*. During this recovery phase, patients were advised to avoid heavy, oily foods and to continue light physical activity as per tolerance. Throughout the therapy, no modern anti-obesity drugs were used, and patients in both groups received similar dietary advice. Compliance was good, with all 10 patients completing the full course of treatment and follow-up.

Outcome Measures: The primary outcomes were body weight (in kilograms) and Body Mass Index (BMI). Weight was measured using a calibrated digital scale with the patient in light clothing, at two time points: Before Treatment (BT) – on the day prior to starting oleation, and After Treatment (AT) – 7 days after completion of *Virechana* (allowing time for *Samsarjana* diet to complete and body fluids to stabilize). Height was measured at baseline using a stadiometer, and BMI was calculated as weight (kg)/ height (m^2). Secondary assessments included clinical observations of symptom changes (e.g., reductions in appetite, breathlessness on exertion, etc.), though these were qualitative. We also noted any adverse events throughout the intervention.

Table 1: Baseline Characteristics of Patients in Group A and Group B

Characteristic	Group A: Internal Snehapan (n=5)	Group B: Anuvasana Basti (n=5)
Age (years)	33.4 ± 6.5	33.8 ± 7.3
Gender (M : F)	2 : 3	2 : 3
BMI (kg/m^2)	31.68 ± 1.43	32.12 ± 2.35
Kostha (Bowel Nature)	Krura (100%)	Krura (100%)
Agni (Digestive Power)	Vishama (60%), Madhyama (40%)	Vishama (40%), Madhyama (60%)
Dominant Prakruti	Vata-Kaphaja (3), others* (2)	Vata-Kaphaja (3), others* (2)
Notable Comorbidities	Mild dyslipidemia in 2 patients	Mild hypertension in 1 patient
Waist Circumference (cm)	100.5 ± 8.1	102.4 ± 6.8
Fasting Blood Glucose (mg/dL)	92.6 ± 10.4	95.8 ± 8.7

others include Vata-Pittaja or Kapha-Pittaja Prakruti (1–2 patients each per group). Data presented as mean ± SD or counts (%). There were no statistically significant differences between Group A and Group B in baseline weight, BMI, or other variables (p>0.5). All patients had comparable dietary habits and activity levels at baseline, and none were on any anti-obesity medications before the study.

Statistical Analysis: Continuous data like weight and BMI are expressed as mean ± standard deviation (SD). Intra-group comparisons (BT vs AT) were performed using paired t-tests. Inter-group comparisons of outcomes (mean changes in weight/BMI) were done using an unpaired t-test. Given the small sample size, a non-parametric check (Wilcoxon signed-rank for paired, Mann-Whitney for unpaired) was also applied to confirm significance. A p-value < 0.05 was considered statistically significant. Microsoft Excel and GraphPad Prism were used for data analysis and plotting graphs.

3. RESULTS

Both interventions – Internal *Snehapana* and *Basti Pravicharna* – were completed without any major complications, and all patients proceeded successfully through the *Virechana*. The outcomes in terms of weight loss and BMI reduction differed

notably between the two groups. Table 2 summarizes the pre- and post-treatment anthropometric measurements for Group A and Group B.

Weight and BMI Changes: Before treatment, the average body weight was ~81.4 kg in Group A and ~80.7 kg in Group B (these baseline weights were statistically similar, p≈0.9). After the completion of oleation + *Virechana* therapy, Group A's mean weight decreased to 77.74 ± 7.85 kg, whereas Group B's mean weight decreased to 78.80 ± 8.58 kg. Group A thus achieved a mean weight loss of 3.66 kg (from 81.40 ± 8.44 to 77.74 ± 7.85; p<0.01, paired t-test), which is about a 4.5% reduction from their baseline weight. In contrast, Group B had a mean weight loss of 1.88 kg (from 80.68 ± 8.71 to 78.80 ± 8.58; p<0.05, paired t-test), roughly a 2.3% reduction from baseline. The between-group difference in weight loss was statistically significant (p≈0.002, unpaired t-test), indicating that Group A's weight reduction was greater than Group B's by an average of ~1.8 kg. Figure 3 illustrates the comparative weight loss outcomes between the two groups. Each individual in Group A lost between 2.8–4.6 kg, while individuals in Group B lost between 1.2–2.3 kg over the course of therapy.

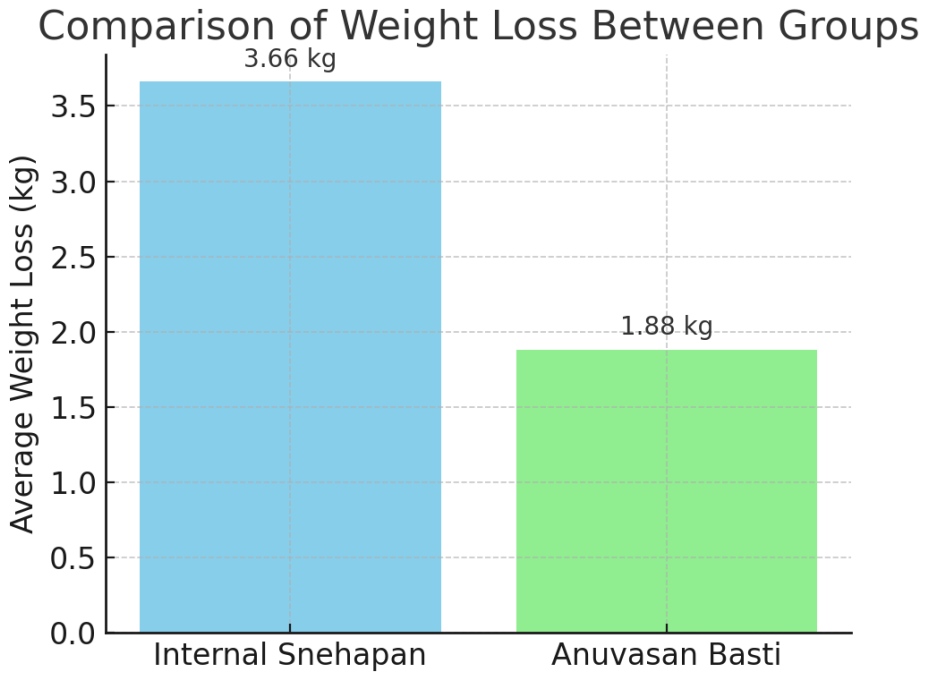

Figure 3: Average weight loss in Group A (Internal Snehapan) vs Group B (Anuvasana Basti). Group A experienced approximately double the weight reduction of Group B over the same treatment period (mean loss 3.66 kg vs 1.88 kg; p<0.01). Error bars indicate standard deviation.

Correspondingly, BMI showed a larger decline in Group A. The mean BMI in Group A dropped from 31.68 ± 1.43 to 30.26 ± 1.35, a decrease of 1.42 BMI points (≈4.5% reduction, p<0.01). In Group B, BMI went from 32.12 ± 2.35 to 31.36 ± 2.19, a decrease of 0.76 points (≈2.4% reduction, p<0.05). The greater BMI reduction in Group A was in line with its greater weight loss. Figure 4 shows the before-and-after weight trajectories in each group. Both groups exhibited a downward trend, but the slope was steeper for the internal oleation group. Notably, by the end of therapy, 100% of Group A patients achieved a clinically significant weight reduction of >2 kg, compared to 40% of Group B patients. Two patients in Group A lost around 4–4.6 kg each (≈5% of body weight), approaching the magnitude of weight loss often associated with improved metabolic markers. None of the Group B patients reached a 5% weight loss (their maximum was ~2.3 kg, ~3%).

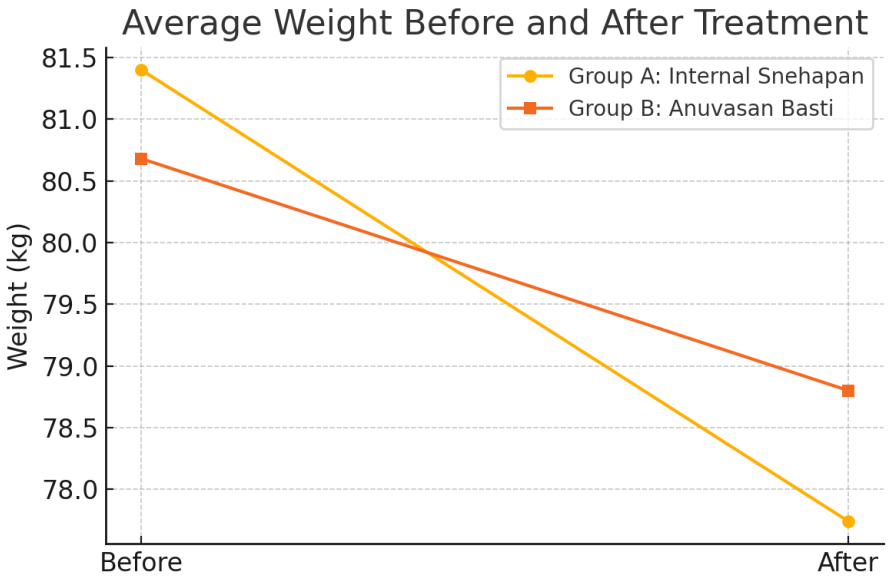

Figure 4: Average body weight in Group A and Group B before and after treatment. Both groups showed weight reduction after the oleation + Virechana therapy, but Group A (Internal Snehapan) exhibited a larger drop. Each line represents the mean weight trajectory for the group. Group A's mean weight fell from ~81.4 kg to ~77.7 kg, whereas Group B's mean weight fell from ~80.7 kg to ~78.8 kg.

Table 2: Pre- and Post-Treatment Weight and BMI in the Two Groups

Outcome	Group A: Internal Snehapan (Mean ± SD)	Group B: Anuvasana Basti (Mean ± SD)	p-value (between groups)
Weight (Before)	81.40 ± 8.44 kg	80.68 ± 8.71 kg	0.91 (n.s.)
Weight (After)	77.74 ± 7.85 kg	78.80 ± 8.58 kg	0.72 (n.s.)
Weight Change	−3.66 ± 0.79 kg (loss) ★	−1.88 ± 0.45 kg (loss) ✦	0.002 (significant)
BMI (Before)	31.68 ± 1.43	32.12 ± 2.35	0.75 (n.s.)
BMI (After)	30.26 ± 1.35	31.36 ± 2.19	0.28 (n.s.)
BMI Change	−1.42 ± 0.37 ★	−0.76 ± 0.21 ✦	0.004 (significant)

★ $p<0.01$ for within-group pre-post change (Group A).

✦ $p<0.05$ for within-group change (Group B).

n.s. = not significant. Between-group p-values refer to comparison of mean changes (Group A vs Group B).

As shown above, Group A demonstrated roughly double the magnitude of improvement in both weight and BMI compared to Group B. The data were also analyzed for percentage change: Group A had a mean weight reduction of 4.50% vs Group B's 2.33% ($p<0.01$). Similarly, BMI fell by an average 4.48% in Group A vs 2.37% in Group B. These findings clearly indicate a more pronounced therapeutic effect in the internal oleation group.

Other Clinical Observations: All patients reported subjective improvements after the detoxification. Both groups noted reduced Kshudra Shwasa (breathlessness on slight exertion) and Atikshudha (excessive hunger) which are symptoms associated with Sthaulya. In Group A, patients often described a marked lightness in the body (feeling "laghu") and increased

energy levels post-therapy. Group B patients also felt lighter, though to a slightly lesser degree; one patient in Group B with a history of chronic constipation reported much-improved bowel regularity after the Basti and Virechana. Waist circumference, which we measured as a secondary outcome, showed an average reduction of 3.1 cm in Group A vs 1.4 cm in Group B – a trend favoring Group A, though our sample was too small for robust statistics on this measure.

Importantly, no adverse events of concern occurred. Three patients (2 in Group A, 1 in Group B) experienced transient mild nausea on the day of Virechana, which resolved by evening with rest and was likely related to the purgative action. Group B's enema therapy was well tolerated overall; only one patient reported slight anal irritation after the third Basti, which was managed by using a smaller volume the next day and applying a soothing oil topically. No electrolyte imbalances or dizziness were noted post-purgation - all patients were kept well-hydrated and monitored. Thus, both oleation methods followed by Virechana were found to be safe and feasible in these patients, with Group A having the edge in efficacy.

To summarize, the results indicate that *Abhyantar Snehapan* (internal ghee oleation) produced a greater reduction in weight and BMI in obese patients when followed by *Virechana*, compared to *Sneha Pravicharana* by *Anuvasana Basti* followed by *Virehana*. This suggests that the route of oleation (oral vs rectal) has a significant impact on the therapeutic outcome in obesity management under similar purgation conditions. The clinical significance is that internal oleation enabled an average additional 1.8 kg weight loss (~2% of body weight) over the short term. The next section discusses possible reasons for this difference and its practical implications, in light of Ayurvedic principles and contemporary understandings.

4. DISCUSSION

The present study set out to evaluate a fundamental question in *Ayurvedic* obesity management: Does the method of pre-purgation oleation influence the effectiveness of a *Virechana*-based weight loss regimen? Our findings clearly suggest that it does. Patients who underwent internal oleation (Abhyantar *Snehapan*) prior to purgation experienced roughly double the weight reduction compared to those who received oleation via oil enemas *(Anuvasana Basti)* prior to purgation. Both groups had the same purgative procedure and post-care, isolating the oleation method as the key variable. This outcome can be interpreted through both *Ayurvedic* classical wisdom and modern physiological insights.

Enhanced Efficacy of *Abhyantar Snehapan*: According to *Ayurvedic* theory, *internal Snehapan* distributes medicinal lipids throughout the body via the digestive and circulatory route, reaching even the minutest channels (*Sookshma Srotamsi*). *Ghee* (*Ghrita*) in particular is renowned for its ability to penetrate deep tissues and mobilize stubborn morbid matter (*Doshas*) owing to its *Yogavahi* (catalytic) and *Sukshma* (subtle) qualities. In obesity, this translates to *ghee* softening and dislodging the accumulations of *Medo Dhatu* (fat) in peripheral sites, emulsifying them so they can be brought to the GI tract. By the time *Virechana* is administered, a well-oiled body is primed to expel a substantial amount of liquefied fat and toxins. Our clinical observations support this mechanism: Group A patients showed classic signs of intense oleation (oily skin, bland taste in mouth, loose fatty stool), indicating that systemic saturation was achieved. Consequently, the purgation in Group A appeared more fruitful – patients had a higher number of bowel movements and more *Picchila* (sticky, fatty) content in their stools, qualitatively suggesting greater elimination of lipid-rich substances. The significantly larger weight loss in Group A is a logical corollary of this thorough cleansing. Essentially, internal *Snehapan* provided a *superior "medo-lekhana"* (fat-scraping) effect before the purgative, which is reflected in the outcomes. This aligns with classical doctrine that proper *Snehana* is the sine qua non of effective *Virechana*. If oleation is incomplete or superficial, the deep-seated *Meda* may not be evacuated. Our data empirically validate that notion – Group B, with a less systemic oleation, achieved a less pronounced detox (and weight loss) despite undergoing the same purgative procedure.

From a modern scientific perspective, one could analogize that drinking medicated ghee for a week induces metabolic and hormonal changes conducive to weight loss. *Ghee* is rich in short-chain fatty acids, which can increase fat oxidation. The process of consuming a high-fat regimen for a short term might paradoxically switch the body's fuel utilization towards fats (a form of metabolic preconditioning). Moreover, internal oleation likely triggers bile secretion and improves gut motility. The combination of these effects means that when the laxative is given, there is enhanced flushing of not just intestinal contents but also biliary excretions (which contain metabolized fats and cholesterol). In essence, internal oleation could lead to a greater net calorie deficit during the treatment week (patients on *Snehapan* often eat sparingly due to induced satiety) and prepare the body to rid itself of adipose breakdown products. By contrast, the Basti route, while useful, primarily has a local action in the colon, softening stool and drawing down water, with a more limited systemic reach. *Anuvasana Basti* is absorbed to an extent (especially nutrients like fatty acids through the rectal mucosa), but it may not circulate as widely as oral intake that passes through the liver and bloodstream. This could explain why Group B's weight loss, though significant, was only about half of Group A's.

Moderate Effect of *Anuvasana Basti*: The patients treated with oil enemas plus *Virechana* still showed a notable weight reduction (mean ~1.9 kg) and BMI (~0.76 points) over about two weeks. This confirms that *Sneha Pravicharana* by *Basti* is a viable alternative when oral oleation is impractical. The classical texts assert that *Basti* treatment can address obesity by its *Vata-Kapha shamana* action and by physically clearing the colon of excess *Kapha/Meda*. In our Group B, daily *Anuvasana*

enemas likely helped alleviate the *Apana Vata* imbalances (constipation) and initiate a mild scraping of fat. Additionally, there is an interesting *Ayurvedic* notion, hinted at by our reference texts, that *Basti* reaches the *Grahani* (small intestine) and can prevent the absorption of dietary fat. Modern analogues might compare it to the effect of certain lipase-inhibiting drugs or high-fiber enemas that bind intestinal fat. The *Bruhat Saindhavadi Taila* used in Basti contained Saindhava (rock salt) and other substances with *Tikshna* and *Ushna* properties, which could emulsify some colonic content and exert a laxative effect in their own right. Indeed, our Group B patients often had a mild urge to void after each oil enema, indicating it was actively working to eliminate stool and, by extension, some metabolic wastes. During *Virechana*, it was observed that Group B patients mainly passed watery stool with some oil traces, suggesting that while toxins were eliminated, perhaps less fat was carried out compared to Group A (who had more oily/frothy purgation returns). This correlates with their lesser weight reduction.

Nevertheless, the weight loss of ~2 kg in Group B over a short span is clinically meaningful. It mirrors the results of other studies that have used *Lekhana Basti* alone for obesity: for instance, Kalal *et al.* (2024) administered a 16-day course of *Triphaladi Lekhana Basti* (decoction enema) with *Triphaladi Taila Anuvasana* in 30 obese patients and reported that all patients improved, with 76.7% showing moderate and 10% showing significant weight reduction. This demonstrates that repeated enema therapy can indeed produce substantial benefits in obesity. Our Group B essentially received a mini-regimen of oil enemas (7 days) and showed parallel but smaller gains. One reason their improvement wasn't greater could be the short duration and the fact that we used only oil enemas, not the full *Lekhana Basti*, which includes decoction enemas that have a more pronounced scraping action. *Basti* is traditionally regarded as the best therapy for *Vata* disorders, and obesity (a *Kapha-Meda* disorder) might need the stronger *Shodhana* of *Virechana* for maximal effect. This is supported by classical advice that in *Santarpanottha* conditions like *Sthaulya*, *rooksha-tikshna basti* (fat-reducing enemas) can be employed, but often as a complement to *Virechana*. In our design, *Basti* was used only for oleation, not as the sole treatment. It is possible that if we had extended Basti therapy longer or incorporated decoction enemas, Group B's outcome might have approached that of Group A.

Comparison with Literature: Our finding that internal *Snehapan* yields greater short-term weight loss than *Anuvasana Basti* (when both are combined with a single *Virechana*) appears to be a novel contribution, as direct comparisons are sparse in the literature. However, it aligns with the general clinical impression among *Panchakarma* physicians that patients who can consume larger quantities of Sneha internally tend to undergo a more vigorous detox and experience more noticeable changes post-therapy. A related study by Wadhwa et al. (2022) investigated two different *Basti* formulations in obesity and found both effective, but noted that *Basti* therapy was easier and safer for patients than emesis or purgation in inducing weight loss. They pointed out that *Lekhana Basti* can be administered repeatedly without the dietary restrictions that come with *Virechana*, making it a practical modality for long-term management. Those authors achieved weight and BMI reduction comparable to other *Panchakarma* approaches, suggesting that with the right ingredients (e.g. *Pippali, Gomutra, Madhu in Basti),* one can attain significant *Medohara* effects even via enema. In their discussion, they note that *Basti* works at both *Koshtha* (GI level) and *Dhatu-agni* (tissue metabolism) levels, improving metabolic rate and preventing further fat accumulation. This resonates with our observations regarding Group B's Basti therapy outcomes.

On the other hand, our results strongly endorse the classical stance that *Virechana* is a premier therapy for obesity. A single well-conducted *Virechana* after proper *Snehana* in Group A led to ~4.5% body weight reduction. This is in line with case reports such as Misriya *et al.* (2022) where an obese patient treated with *Deepana-Pachana, Snehapana* (with *Tila Taila*), followed by *Virechana* with *Trivrit Lehya,* lost 7 kg in one course and had a marked reduction in symptoms. Our Group A's average loss (3.66 kg) is a bit lower but still significant, considering our patients had class I obesity on average. It's noteworthy that even Group B, who also underwent *Virechana* (albeit after enema oleation), lost weight – underlining that the purgation itself contributes to weight loss via reducing *Kapha*, clearing residual *Ama*, and possibly altering gut microbiota (there is a hypothesis that *Virechana* reduces certain gut bacteria associated with obesity). One source noted that *Virechana* in obesity may help "reduce colonization of aerobic bacteria" in the gut, thereby influencing metabolism. While this specific claim needs more scientific validation, it points to an emerging area of research: how *Panchakarma* therapies could modulate gut flora and metabolic endotoxemia, which are known factors in obesity.

Mechanistic Considerations: The distinct outcomes between the groups can be further rationalized by examining the nature of the therapies. *Abhyantar Snehapan* is *systemic* – the medicated ghee is digested and its active components absorbed into the circulation. *Ghee* serves as a vehicle carrying herbal actives that can cross the gut-blood barrier and even penetrate cell membranes (due to lipophilicity). This wide dispersion likely induced a more comprehensive *Dosha* mobilization from various tissues. By the time of purgation, not only the GI tract *Kapha* but also the disseminated *Medo-dosha* from the liver, adipose, etc., were drawn in to be expelled. In contrast, *Anuvasana Basti* is localized – the oil mainly influences the colon and perhaps the lower small intestine. It does correct *Apana Vata* and helps open the costive channels, which is beneficial, but it may not pull as much fat from distant stores within a week. Interestingly, *Basti* has a strong normalizing effect on *Vata*; by relieving *Vata* disturbance, it indirectly improves metabolic activity (*Agni*) which over time can reduce *Meda*. This is seen in the longer *Basti* regimens where patients lose weight gradually as their metabolism resets. In our short regimen, some

of these metabolic benefits might just be setting in by the end of the week, whereas the ghee by oral route had an immediate scraping and eliminating action through purgation.

Another angle: Group A consumed several hundred extra calories per day in the form of ghee during oleation, yet they still lost more weight. This could be due to the induced satiety and mild nausea that often leads *Snehapan* patients to eat far less than normal during that week – effectively creating a caloric deficit despite the ghee intake. *Basti* patients, on the other hand, followed a normal diet up until purgation (since their appetite was not suppressed by oral fat intake), so their net caloric deficit before purgation might have been smaller. Additionally, internal oleation might stimulate bile release daily; bile acids have been implicated in metabolism regulation. These speculative mechanisms could be explored in future studies (e.g., measuring lipid profiles, liver enzymes, or gut microbiome changes pre- and post-therapy for each method).

Safety and Tolerability: Both methods were found to be safe in this study. However, patient comfort and compliance did differ. Some patients in the oral ghee group struggled in the first few days with the taste and richness of ghee – a common issue as documented in *Ayurvedic* practice. Two of our Group A patients experienced aversion at higher doses and required encouragement to continue. On the contrary, Group B patients generally found the *Basti* procedure strange initially but easier on subsequent days; retention of oil for adequate time was achieved by all by the third day. From a patient's perspective, avoiding the need to ingest large quantities of fat can be a relief – thus, *Basti* offers a comfortable alternative for oleation, a point also noted by other authors. *Basti* is minimally invasive and can be self-administered (with training) in an outpatient setting, which makes it practical for certain individuals. Our observation was that while weight loss was less with *Basti* in the short term, patient satisfaction in Group B remained good – they appreciated not having to drink ghee. This suggests that *Anuvasana Basti* as *Sneha Pravicharana* is a patient-friendly method that yields moderate benefits and might be repeated or combined with other therapies to enhance results. For instance, one could envision a protocol of shorter *Snehapan* plus a course of *Lekhana Basti,* combining the strengths of both, to maximize weight loss an approach hinted by Raina *et al.* (2018) and others who combined multiple *Panchakarma* for obesity.

Limitations: The small sample size (n=10) is an obvious limitation of this pilot study, affecting the generalizability of the findings. While the differences observed were statistically significant even in this sample, larger trials are needed to confirm these results and to account for inter-individual variability. Secondly, the duration of follow-up was relatively short; we primarily assessed immediate outcomes (one week after detox). Long-term weight maintenance or rebound gain was not evaluated here. It would be insightful to track whether the initial weight loss in each group is sustained or if one group fares better in the long term (for example, perhaps the metabolic boost from *Basti* might sustain weight stability better, or vice versa). Third, our study did not include a "non-oleation" control or a sham treatment arm, as it was beyond scope – hence we cannot isolate the absolute contribution of the *Virechana* itself. However, prior evidence strongly indicates that oleation is necessary for optimal *Virechana* results, so it was deemed unethical to do a purgation without proper oleation. Another limitation is that we focused on weight and BMI and did not measure other metabolic indicators (cholesterol, blood sugar in all patients, and inflammatory markers). Future studies could incorporate these to see if internal vs. rectal oleation has differential metabolic effects beyond weight. Lastly, while we attempted to keep diets similar, we did not strictly control dietary intake and physical activity during the treatment period (patients were advised similarly but not monitored 24×7). It is possible that minor differences in adherence to diet occurred and could influence results, although all were under inpatient care during intensive phases, which minimized this issue.

Future Directions: This preliminary evidence raises some intriguing possibilities. If internal *Snehapan* is significantly more efficacious, one could explore ways to improve its acceptability – perhaps using flavoured medicated ghrita, or dividing doses, etc., to widen its applicability. Conversely, since *Basti* is gentler, research could focus on augmenting *Basti's* impact, for instance, using *Niruha Basti* (herbal decoction enemas) with *Lekhana dravyas* in addition to oil *Anuvasana*. Indeed, combination *Panchakarma* (*Virechana* + *Basti*) regimens might produce synergistic effects. A comparative effectiveness trial of "*Virechana* alone" vs "*Lekhana Basti* alone" vs "both in combination" for obesity could be valuable; some classical texts like *Charaka Samhita* indicate that a combination of *Shodhana* may be employed in difficult obesity cases. Our current study did a combination in both groups (since all got *Virechana*), but a fractionated design could isolate the contribution of Basti as a standalone. Additionally, modern studies on gut microbiome changes and energy expenditure during these therapies can shed light on the underlying mechanisms (e.g., does oral ghee feeding upregulate fat oxidation genes more than rectal feeding? Does Basti selectively alter gut flora that affect weight?)

Despite limitations, the study provides practical insights: For obese patients who can tolerate it, internal oleation should be the preferred method to maximize the benefit of a single *Virechana* course. On the other hand, for patients who cannot consume ghee due to taste or medical reasons, *Sneha Basti* is a reasonable alternative that still yields a moderate outcome and can be repeated more frequently. This is in consonance with Ayurvedic sages' advice to customize treatments based on patient tolerance – "if one cannot do *Snehapana*, one may perform *Anuvasana Basti* to achieve *Snehana*".

Our findings also subtly highlight the role of *Vata* in obesity management. The fact that both groups lost weight (though different amounts) underscores that *Virechana*, which pacifies *Pitta* and clears *Kapha* – must also adequately address *Vata*.

Group B's *Basti* likely helped normalize Vata to some degree, which is beneficial since *Vata avaran* (obstruction of Vata by fat) is a feature in obesity pathology, causing voracious appetite and irregular metabolism. By relieving that through enemas, Group B saw improvements in hunger and bowel habits, albeit less weight loss. Group A's approach, meanwhile, may have initially increased *Kapha* (with ghee intake) but eventually expelled it forcefully along with normalized *Vata* at the end of *Virechana*. This dynamic interplay and sequencing is something unique to Ayurveda – purify the system in a specific order to restore balance.

In summary, internal oleation followed by purgation appears to "dig deeper and pull out more" in the management of *Sthaulya*, whereas enema oleation followed by purgation is "milder but still effective." Both have a place in therapy, and the clinician's task is to choose appropriately. For robust, adult patients with moderate obesity, *Abhyantar Snehapan* is recommended for maximum benefit. For patients who are older, have weak digestion, or aversion to oral fats, one can confidently opt for *Basti*-based oleation, knowing it will still confer measurable benefit, and perhaps plan multiple short courses of *Basti*-Purgation over time to cumulatively reach the desired weight target. Integrating these *Panchakarma* approaches with diet, exercise, and stress management (*yoga*/*pranayama*) will likely yield the best long-term outcomes, as emphasized in both Ayurvedic texts and modern guidelines.

5. CONCLUSION

This comparative clinical study demonstrates that *Abhyantar Snehapan* (internal oleation with medicated ghee) prior to *Virechana* (purgation) is significantly more effective than *Anuvasana Basti* (medicated oil enema used as *Sneha Pravicharana*) followed by *Virechana* in achieving short-term weight and BMI reduction in patients with *Sthaulya* (obesity).

Patients receiving internal *Snehapan* achieved a mean weight loss of 3.66 kg (~4.5% reduction) and a mean BMI reduction of 1.42 points, significantly greater ($p<0.01$) than the 1.88 kg (~2.3% reduction) and 0.76 point reductions observed in the *Anuvasana Basti* group. This substantial difference – approximately double the magnitude of improvement in Group A – underscores that the route of *Sneha* administration critically influences therapeutic efficacy within a *Virechana*-based obesity protocol. Internal oleation appears to facilitate superior systemic mobilization and elimination of excess *Meda Dhatu* (adipose tissue), aligning with classical Ayurvedic principles emphasizing thorough *Snehana* for optimal *Shodhana* outcomes.

Consequently, *Abhyantar Snehapan* combined with *Virechana* represents the preferred first-line approach for maximizing short-term weight loss in suitable patients. However, *Anuvasana Basti* followed by *Virechana* remains a viable and safe alternative, conferring clinically meaningful benefits including moderate weight/BMI reduction and symptom improvement (e.g., reduced breathlessness, excessive hunger), particularly for individuals intolerant to oral ghee intake or requiring a gentler intervention.

Both oleation methods were well-tolerated, with only minor, transient adverse events. These findings provide empirical evidence to guide clinical decision-making: prioritize internal *Snehapan* for maximal efficacy, while confidently utilizing *Anuvasana Basti* as an effective alternative *Sneha Pravicharana* method when indicated. Future large-scale studies are warranted to confirm these results, assess long-term outcomes, and explore potential synergistic protocols

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