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Review Article

Ayurveda Section

Panchakarma and Allied Treatments in the Management of *Sthaulya* (Obesity): A Narrative Review

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ABSTRACT

In Ayurveda, *Sthaulya* (obesity) is categorised as a *Santarpanottha Vyadhi* (diseases caused by over-nutrition) and is characterised by an excess of *Meda* and *Kapha*, impaired *Agni*, and obstruction of the *Srotas*. The management of *sthaulya* focuses on *Shodhana* (purification) that also exerts *Apatarpana* (depleting) effects, with *Panchakarma* as the core therapy. A review of clinical studies on *Vamana* (Therapeutic emesis), *Virechana* (Therapeutic purgation), *Basti* (Medicated enema), such as *Lekhaniya Kashaya Basti* and *Bhadradi Asthapana Basti, Nasya* (Nasal administration of medicated oils or powders) was conducted. *Bhadradi Asthapana Basti* effectively reduced Body Mass Index (BMI) and addressed *Kapha-Meda* pathology. *Lekhaniya Kashaya Basti* targeted *Meda*, *Kapha*, and *Vata* at the cellular level. *Udvartana* (Powder massage) and *Rookshana* are supportive treatments, whereas *Abhyanga* is a *Purva karma*. *Udvartana* reduced localised *Meda* more effectively than *Abhyanga*. *Vamana* and *Virechana*, combined with *Rookshana Karma*, were found to be effective in regulating vitiated *doshas*, correcting *Agni*, and clearing the *Srotas*. *Panchakarma* is a *dosha*-specific strategy for managing obesity. As obesity is a chronic, multifactorial, and difficult condition to address, a blend of systemic and local therapies offers a practical and effective approach to its management. However, standardised methods and long-term follow-up are required for widespread clinical implementation. Therefore, this review aims to evaluate the effectiveness of *Panchakarma* in reducing BMI, Waist-Hip Ratio (WHR), circumference of various body parts (chest, abdomen, hip, mid-arm and mid-thigh) and symptoms of *Sthaulya.*

Keywords: Body mass index, *Lekhana basti*, Weight reduction

INTRODUCTION

Obesity is a rapidly growing global health concern, primarily driven by dietary changes, sedentary lifestyles, and urbanisation. It is defined by an excessive accumulation of body fat, which leads to gain in body weight that is above the healthy. The clinical standard for defining adult obesity is a BMI of 30 or higher. A BMI of 18.5-24.9 is considered normal or healthy by the World Health Organisation (WHO), 25.0-29.9 is considered overweight, and 30.0 or higher is considered indicative of obesity [1]. Obesity co-morbidities may include cardiovascular risks such as heart attack and stroke, metabolic disorders such as Type 2 diabetes and liver disease, cancer, and kidney failure. Obesity further contributes to osteoarthritis and pain in the joints, infertility, sleep apnoea, and depression [2]. According to the WHO, overall, about 13% of the world's adult population (11% men and 15% women) were obese in 2016. The worldwide prevalence of obesity nearly tripled between 1975 and 2016 [3].

The prevalence of overweight and obesity in India is increasing faster than the world average. For instance, the prevalence of overweight increased from 8.4% to 15.5% among women between 1998 and 2015, and the prevalence of obesity increased from 2.2% to 5.1% over the same period [4]. As per the National Family Health Survey (NFHS)-5 (2019-21), overall, 24% of Indian women and 23% of Indian men are overweight or obese. As per the NFHS-5 (2019-2021), in the category of ages 15-49 years, 6.4% of women and 4.0% of men are obese [5].

There are different treatment modalities described by modern science for the management of obesity, which include lifestyle modifications, pharmacological treatments, surgical interventions, and psychological support. Among these, bariatric surgery is the most effective treatment for substantial weight loss. However, it often leads to nutritional deficiencies and necessitates lifelong supplementation [6]. Hence, there is a need to explore alternative and holistic therapeutic modalities. In Ayurveda, *Sthaulya* stands out as a condition classified under *Ashtau Nindita* (eight undesirable conditions) [7]. Moreover, *Sushruta* emphasised *dhatwagnimandya* (metabolic disturbances) in the aetiopathogenesis of *Sthaulya* [8]. A person with excess deposition of *Meda* along with *Mamsa Dhatu* in *Sphika* (buttocks), *Udara* (Abdomen) and *Stana* (Chest) region due to the imbalanced *Doshas* (*Vata, pitta*, and *Kapha*), *Agni* (digestive fire), *Malas* (waste products) and *Srotas* (microcirculatory channels) is termed as *Atisthula* [9]. So, excess *kapha* and *meda* are traditionally associated with weight gain, obesity [10].

These Ayurvedic concepts show correspondence with modern anthropometric indicators used to assess adiposity. BMI reflects overall adiposity [11] while WHR indicates central obesity [12]. Increased BMI and WHR are commonly observed in individuals exhibiting *Kapha* predominance and *Meda vriddhi* (excess fat tissue). Conversely, reduced *Agni* is associated with higher BMI and WHR due to inefficient energy metabolism and increased fat deposition. Thus, *Kapha* and *Meda* demonstrate a positive correlation with BMI and WHR, whereas *Agni* shows an inverse relationship with these anthropometric parameters. To interrupt the *Samprapti* (pathogenesis) of *Sthaulya*, Ayurveda recommends *Shodhana* therapies such as *Vamana* (therapeutic emesis) and *Virechana* (therapeutic purgation), which help eliminate vitiated *doshas*, improve *Agni*, and restore metabolic balance [13]. However, these therapies are not suitable for all patients. For example, *Swedana* (Sudation) is contraindicated in *Atisthula* (extremely obese) individuals, and *Vamana* and *Virechana* may also be poorly tolerated in such cases. Therefore, milder interventions such as *Mridu* or *Niragni Sweda* and *Mridu Shodhana* may be considered when appropriate [14]. The need for individualised selection of procedures represents a practical limitation, as it restricts the use of a single standardised *Panchakarma* protocol for various conditions of obesity and highlights the need for more stratified and standardised future research [15].

The classical Ayurvedic literature emphasises the concept that *karshya* (leanness) is better than *Sthaulya* (obesity), indicating that controlling obesity is much harder than controlling leanness [16]. The treatment of *Sthaulya* (obesity) involves the administration of *Aushadha*, *Ahara*, and *Vihara* that exhibit *Medonashaka* (fat-reducing), *Vatanashaka* (*Vata*-pacifying), and *Kaphanashaka* (*Kapha*-pacifying) properties [17]. *Shodhana* procedures (e.g., *Vamana*/*Virechana*/*Basti*/*Nasya*) may be selected based on *Dosha* dominance, *Agni*, *Bala* and tolerance, along with appropriate preparatory and post-procedure regimens.

The objective is to analyse and review existing clinical research on the effectiveness of *Panchakarma* and allied treatment in *Sthaulya* (obesity), focusing on BMI and related anthropometric outcomes.

LITERATURE SEARCH

A complete literature review was conducted using databases such as PubMed, ResearchGate, Scopus, and Google Scholar. Relevant clinical trials, Randomised Controlled Trials (RCTs) and Narrative review articles on the management of obesity through *Panchakarma*. Selected articles (2014-2023) were critically examined and analysed for scientific validity, methodology, and BMI-reducing outcomes, to derive meaningful conclusions regarding the role of *Panchakarma* in the management of *Sthaulya* (obesity).

Management of *Sthaulya* (obesity) with *panchakarma* therapies: Recent research supports the idea that *Panchakarma* therapies such as *Basti*, *Vamana*, *Virechana* and *Nasya* can reduce BMI, body weight, skinfold thickness, and the circumference of various body parts, while also improving metabolic health in obese individuals [Table/Fig-1] [18-23].

Management of *Sthaulya* (obesity) through allied therapies: Allied therapies such as *Udvartana*, *Abhyanga*, yoga, dietary regulation and lifestyle modification play an important supportive role by improving metabolism and helping maintain healthy body weight [Table/Fig-2] [24-27].

Procedure-wise outcomes

a) ***Basti karma*:** Across the included *Basti* trials- predominantly open-label with small to moderate sample sizes (n≈30–70)- a consistent trend was observed, showing reductions in body weight, BMI, and central adiposity. However, the *magnitude* of these effects varies with the regimen intensity (e.g., *Kala Basti* versus a monthly schedule), the presence of co-interventions, and the type of comparator used.

***Basti* vs diet:** *Lekhaniya Kashaya Basti* demonstrated significant reductions in BMI and WHR compared with *Pathya Ahara*-only control, supporting an additive benefit of *Basti* beyond dietary guidance [18].

***Basti* vs *Basti* comparisons:** In a direct comparison, *Bhadradi Asthapana Basti* produced slightly greater % reductions in weight and BMI, while *Lekhana Basti* showed comparable or slightly better WHR, skin-fold changes in some parameters, indicating both regimens are active but may differ in where benefits concentrate [19].

***Basti* vs *Nasya* (pilot):** *Lekhana Basti* showed greater weight and WHR improvement than *Rechana Nasya*, suggesting *Nasya* may be better positioned as an adjunct rather than a primary obesity intervention [20].

***Basti* vs *Vamana*:** In the comparative trial, the *Basti* arm achieved larger reductions in body weight and BMI than the *Vamana* arm, suggesting *Basti* may be more consistently "weight-responsive" *Shodhana* option in these datasets [22].

Study design	Sample size	Intervention	Outcome	Results
Randomised controlled stratified, open-label study [18]	Total patient: 70 Group-I - 35 Group-II -35	Group I-*Lekhaniya Kashaya Basti* preparation: *Saindhava Lavana*- 10 gm *Madhu* (Honey)- 10 gm, *Gomutra* (Cow urine)-100 mL *Tila taila* (Sesame oil)-100 mL, procedure was repeated once a month consecutively for a period of three months Group-2: *Pathya Ahara* group	BMI, Hip waist ratio and weight	Significant reduction in BMI and WHR in Group-I as compared to Group-II. The *Lekhaniya Kashaya Basti* is effective (p-value <0.001) for weight reduction.
Randomised controlled stratified, open-label [19]	Total 66 patients	Group-A: *Bhadradi Asthapana Basti* Group B: *Lekhana Basti*. Both groups received *Anuvasana Basti* with *Murchita Tila Taila* (*Kala Basti* schedule for 64 days).	Body Weight, BMI, WHR, Skinfold thickness (triceps, biceps, subscapular), Pinch test	*Bhadradi Asthapana* Vs *Lekhana Basti* Body weight ↓5.82% vs 4.84%; BMI ↓6.14% vs 5.06%; WHR ↓1.26% vs 1.63%; skinfold improvements in both groups.
An open-label, randomised [20]	Total 30 patients 15 in each group	*Basti* for 30 days, Group A-*Lekhana Basti* (Dose 960 mL approx), *Anuvasana Basti* with *Triphaladi taila* (Dose 120 mL) Group B- *Rechana Nasya* with *Triphaladi taila* for 28 days, Dose of 8 drops (0.5 mL) Per nostril	Weight, Waist-Hip Ratio (WHR), Body Circumference, skinfold thickness	Group-A vs Group-B: Body weight ↓3.87 vs 0.80; Chest circumference ↓3.20 vs 0.70; Mid-arm circumference ↓1.87 vs 1.60; Triceps SFT ↓0.47 vs 0.58; Subscapular SFT ↓0.75 vs 0.21; Abdominal SFT ↓1.02 vs 0.37; Mid-thigh circumference ↓3.13 vs 0.80; WHR ↓0.040 vs 0.012; HDL ↓0.61 vs 1.89; LDL ↓9.47 vs 6.68; VLDL ↓1.04 vs 4.60.
Parallel-group comparative clinical study [21]	10 patients	Group-A: *Snehapana* with Go *Ghrita* (cow ghee) for seven days Group-B: *Sneha Pravicharana* (an alternative oleation method) by daily *Anuvasana Basti* with *Bruhat Saindhavadi Taila* for 7 days. Followed by *Virechana* in both groups.	Weight and BMI	Group-A: 3.66 kg mean weight loss (4.5% Reduction from baseline). Group-B: 1.88 kg mean weight loss (2.3% Reduction from baseline). Weight reduction was greater in Group-A
Clinical trial [22]	Total patients 66, Group A - 32 patients Group B -34 patients	Group-A: *Vamana* – *Snehapana* (*Tila taila*), *Sarvanga Abhyanga* (*Bala* taila), *Vamana* with *Madanphala Pippali* + *Saindhava* + *Madhu*. Group-B: *Lekhana Basti*. *Kutki churna* 3 g BD, ½ hr before meals with warm water, 1.5 months for both the groups.	Weight, BMI and Chest, Abdomen, Hip and Mid-thigh, Mid-calf and Mid-arm circumference	Group-A (*Vamana*) vs Group-B (*Lekhana Basti*): Body weight ↓3.4% vs 6.3%; BMI ↓3.83% vs 6.02%; Chest circumference ↓2.60% vs 2.48%; Abdomen ↓3.81% vs 6.51%; Hip ↓2.48% vs 3.66%; Mid-thigh ↓4.59% vs 4.82%; Mid-calf ↓3.09% vs 3.52%; Mid-arm ↓3.78% vs 4.51%.
Double-arm, open-label clinical study [23]	20 patients Group A -10 Group B- 10	Group-A: *Rookshana Poorvaka Vamana* – *Madanaphala Pippali churna*. Group B: *Rookshana Poorvaka Virechana* - *Trivruta* Avalehya. Both groups: *Udwartana* (*Triphala* + *Kolakullatadi*) followed by *Bashpa Sweda* ×14 days, *Snehapana* (*Murchita Tila Taila*).	BMI and Circumference (hip, Abdomen, Chest, mid-arm, Mid-thigh)	Group-A vs Group-B (Mean Difference): BMI ↓3.09 vs 1.49; Abdominal circumference ↓8.85 vs 6.95; Hip circumference ↓3.91 vs 2.81; Chest circumference ↓3.82 vs 3.79; Mid-arm circumference ↓4.05 vs 2.95; Mid-thigh circumference ↓3.30 vs 3.25.

[Table/Fig-1]: *Panchakarma* treatment [18-23].
Abbreviations: BMI: Body mass index; WHR: Waist-hip ratio; SFT: Skinfold thickness; HDL: High-density lipoprotein; LDL: Low-density lipoprotein; VLDL: Very low-density lipoprotein; BD: Twice daily; g: grams; mL: millilitres. ↓: Reduction; ↑: Increase; *Basti*: Medicated enema; *Anuvasana Basti*: Oil-based enema; *Asthapana Basti*: Decoction-based enema; *Lekhana Basti*: Scraping-type therapeutic enema; *Vamana*: Therapeutic emesis; *Virechana*: Therapeutic purgation; *Nasya*: Nasal administration of drugs; *Snehapana*: Internal oleation therapy; *Udwartana*: Powder massage; *Swedana*: Sudation therapy.

Study design	Sample size	Intervention	Outcomes	Results
Clinical comparative trial [24]	30 patients (15 in each group)	Group A: *Triphala Churna Udwartana* for 14 days Group B: *Triphaladi Taila Abhyanga* for 14 days	Weight, BMI, Body circumference, Skinfold thickness	**Group-A:** Weight ↓ 1.03%; BMI ↓ 1.86%; Circumference ↓ (Chest 1.63%, Abdomen 5.21%, Hip 2.16%, Mid-thigh 6.36%, Mid-arm 3.03%); Skinfold ↓ (Biceps 13.9%, Triceps 13.42%, Subscapular 10.5%, Abdomen 44.65%, Thigh 10.34%). **Group-B:** Weight ↓ 1.69%; BMI ↓ 1.54%; Circumference ↓ (Chest 1.29%, Abdomen 4.77%, Hip 2.86%, Mid-thigh 2.13%, Mid-arm 0.7%); Skinfold ↓ (Biceps 12.89%, Triceps 14.77%, Subscapular 12.31%, Supra- iliac 12.52%).
Comparative clinical study [25]	40 patients (20 in each group)	Group-A *Udvartana* (*Haridradi gana churna*) for 45 minutes for 10 days Group-B *Udvartana* (*Triphala churna*) for 45 minutes for 10 days	Weight, BMI, Body circumference, Skinfold thickness	% Change BMI- 2.5% ↓ (Group-A) 2.22% ↓ (Group-B) Waist Circumference 2.84% ↓ (Group-A) 2.52% ↓ (Group-B) Waist-Hip Ratio (WHR) 0.74% ↓ (Group-A) 12.24% ↓ (Group-B) Skin Fold Thickness 7.36% ↓ (Group-A) 8.8% ↓ (Group-B)
Open-labelled single-arm interventional clinical study [26]	15 patients	*Rodhradi gana Churna udvartana* (100 gm) along with *pathya ahara* for 45 minutes, consecutive 15 days	BMI, weight, Body circumference, Lipid profile	Weight - Mean wt. 86.93 → 84.06 (–2.87) ↓ BMI - Mean 34.98 → 33.84 (–1.14) ↓ Waist-Hip Ratio - Mean 0.9493 → 0.9516 (+0.0023) ↑ Chest Circumference - Mean 102.30 → 99.26 (–3.04) ↓ Abdominal Circumference - Mean 105.10 → 102.63 (–2.47) ↓ Total Cholesterol - Mean 179.66 → 168.20 (–11.46) ↓ HDL - Mean 37.13 → 38.60 (+1.47) ↑ LDL - Mean 110.20 → 107.66 (–2.54) ↓ Triglycerides - Mean 163.46 → 157.46 (–6.00) ↓ VLDL - Mean 38.80 → 34.46 (–4.34) ↓
Clinical trial [27]	116 patients were divided into Group-A and Group-B	Group-A: Diet (*Shuka Dhanya* – *Bajra*, *Jwar*, *Yava*, *Nachni*, *Shimbi Dhanya*, *Shaka Varga*, *Phala Varga*) + Lifestyle modification + *Yogasanas* (Omkara, conditioning exercises, *Pashchimottanasan*, *Pavanmuktasana*, *Bhujangasana*, *Hastapadasana*) for 60 days. Group-B: Diet + lifestyle modification	Weight, BMI, Hip circumference, WHR	Group-A: Weight 78.76→75.56 (–3.20), BMI 30.75→29.50 (–1.25), Hip circumference 102.42→102.00 (–0.42), WHR 0.97→0.93 (–0.04); p<0.001 (HS). Group-B: Weight 76.29→75.38 (–0.90), BMI 29.86→29.50 (–0.36), Hip circumference 101.97→101.61 (–0.36), WHR 0.95→0.94 (–0.01); p<0.001 (HS).

[Table/Fig-2]: Clinical studies on allied Ayurvedic therapies (*udvartana*, *abhyanga*, yoga, diet, and lifestyle modification) used as supportive interventions in the management of *Sthaulya* (obesity) [24-27].
Abbreviations: BMI: Body mass index; WHR: Waist–hip ratio; SFT: Skinfold thickness; HDL: High-density lipoprotein; LDL: Low-density lipoprotein; VLDL: Very low-density lipoprotein. ↓: Reduction; ↑: Increase; HS: Highly significant. *Udvartana*: Dry powder massage; *Abhyanga*: Oil massage; *Pathya Ahara*: Prescribed diet; *Yogasanas*: Therapeutic yoga practices.

Niruha Basti plays a significant role in managing *Sthaulya*. *Rukshana Tikshna Basti* is considered highly suitable for chronic and complicated disorders like *Sthaulya* [28]. *Sushruta* describes *Lekhana Basti* as being prepared with *Triphala Kwatha* [29]. This *Basti* helps remove obstructions of *Meda*, *Kapha*, and *Kleda* from the *Srotas*, alleviates vitiated *Vata*, and normalises the functions of *Agni* and *Vayu* [30]. When *Basti Dravyas* reach the large and small intestines, they are absorbed through the intestinal mucosa. Due to the light (*Laghu*), hot (*Ushna*), and sharp (*Tikshna*) properties of the *Basti* substances, they break down obstructions in the channels and expel morbid materials from throughout the body. This process disrupts the pathogenesis of diseases like *Sthaulya* (obesity) [31].

b) ***Vamana karma*:** Evidence from comparative studies suggests that both *Vamana* and *Lekhana Basti* are effective in reducing body weight, BMI, and body circumferences; however, direct comparative trials have reported greater overall improvement in weight reduction and BMI with *Lekhana Basti* [22]. In the *Rookshana-poorvaka* comparison, both *Vamana* and *Virechana* improved anthropometry, though the magnitude differed by parameter and protocol intensity [23]. Clinical data support *Vamana* as useful for *Kapha*-dominant presentations, but *Basti* appears more consistently "weight/BMI responsive" in head-to-head comparisons in this dataset.

c) ***Virechana karma*:** A comparative clinical study evaluating two different *Snehana* methods before *Virechana* reported greater reduction in body weight and BMI in the Go Ghrita group compared to the *Sneha Pravicharana* group [21].

Sthaulya is described as a condition associated with excessive *Mamsa*, *Meda* and *Kapha*. Therefore, *Rookshana* is recommended as a *Vishishta Poorva Karma* before *Samshodhana* therapies. *Rookshana*, in the form of *Udvartana* with *Triphala* and *Kolakulathadi Churna,* helps reduce vitiated *Kapha Dosha* and *Medo Dhatu* due to its *Ushna*, *Tikshna*, *Kaphamedohara* and *Shoshana* properties. In a comparative study evaluating *Rookshana-poorvaka Vamana* and *Virechana*, improvements were observed in BMI and body circumference parameters in both groups, with variations in mean changes across different measurements [23].

d) ***Nasya*:** In the reviewed literature, only one small pilot study evaluated the role of *Nasya* in the management of obesity. *Triphaladi Taila* used for *Nasya* possesses *Ushna*, *Tikshna*, *Katu* and *Tikta* properties and exhibits *Kapha-Vata* shamaka effects. When administered through the nostrils, the drug is believed to reach the *Shringataka Marma* and subsequently spread to the *Murdha* (brain), *Netra* (eyes), *Shrota* (ears), *Kantha* (throat) and *Siramukhas* (vascular channels). Through this mechanism, *Nasya* may help eliminate morbid *Doshas* and contribute to metabolic regulation and is considered a supportive or adjunct procedure rather than a primary therapeutic strategy in the management of *Sthaulya* [20].

While for allied treatment, the present study, *Triphaladi Taila Abhyanga* has *Kapha-Meda vilayana* properties. Due to the *Ushna* and *Tikshna* guna and massage over *romakupa*, the drug's *virya* enters the body, liquefies *Kapha* and *Meda*, and helps eliminate vitiated *doshas*, resulting in *shareera laghavata*. *Triphala Udvartana*, due to its *ruksha guna*, reduces *Kapha* and *Meda* and helps remove accumulated fat through sweat pores, especially from areas like *sphika*, *udara* and *vaksha*. Hence, *Triphala Udvartana* is considered the best *Bahirparimarjana Chikitsa* for *Madhyama Sthaulya*. Both *Triphaladi Taila Abhyanga* and *Triphala* churna *Udvartana* showed improvement in BMI, circumferences, and skinfold thickness over

14 days, with slightly greater BMI reduction in the *Udvartana* group, indicating their usefulness as adjunct therapies, especially for localised adiposity [24].

In another comparative clinical study, *Haridradi Gana Churna Udvartana* and *Triphala Churna Udvartana* both demonstrated reductions in BMI, waist circumference, WHR and skinfold thickness, indicating the usefulness of *Udvartana* as a supportive therapy in *Sthaulya* management [25].

In another study, drugs of *Rodhradi Gana* mainly possess *Laghu* and *Ruksha Guna*, *Kashaya* and *Tikta Rasa, Katu Vipaka* and *Ushna Virya*, which act as *Vatakaphahara*, relieve *Medavrutta vata*, and reduce body weight and circulating lipids. Powder of *Rodhradi Gana* (*Lodhra*, *Palash*, *Shonaka*, *Ashoka*, *Bharangi*, *Kayaphala*, *Yelvaluka*, *Shalmali*, *Manjishtha*, *Kadamba*, *Kadali*) in equal proportion was used for *Udvartana* and massaged over the body in *Pratiloma* direction. *Udvartana* has *Kapha hara* and *Medovilayana* properties. However, despite improvements in body weight, BMI and lipid profile, a slight increase in WHR was observed in this study, indicating that the effect on central adiposity may not have been uniformly beneficial [26].

In another study, *Yogasanas*, along with proper diet and lifestyle, help improve microcirculation in body channels (*srotas*). This improves the metabolism of *meda dhatu* and reduces the accumulation of deposited *meda*. When metabolism becomes normal, *prakrut meda* is produced. In Ayurveda, *sweda* (sweat) is considered the *upadhatu* of *meda dhatu*. Proper formation of *prakrut meda* helps in the normal production and regulation of *sweda*. Due to this, symptoms like *Gatradaurgandhya* (body odour) and *Swedadhikya* (excessive sweating) are reduced [27].

Long-term weight loss and maintenance outcomes are rarely reported in studies on obesity in ayurveda. Most trials focus on short-term changes in weight or BMI with limited follow-up, so the durability of benefits remains a clear evidence gap. This limitation may be addressed through future well-designed studies using standardised protocols, longer follow-up periods, and comprehensive assessment parameters including metabolic markers, quality of life, and safety outcomes. The research studies discussed in this article support evidence for the efficacy of *Panchakarma* and other complementary treatments in obesity management. Across the research, *Basti* therapy, specifically *Bhadradi Asthapana Basti*, emerged as the most beneficial strategy, with significant decreases in BMI and body weight. Some allied treatments, such as *Udvartana* and *Abhyanga*, yogasana, diet and lifestyle changes, also resulted in measurable improvements, particularly in localised reduction in fat. *Vamana* and *Virechana* demonstrated significant detoxifying and *dosha*-balancing benefits. Future studies should focus on standardising treatment procedures and determining the long-term sustainability of *Panchakarma* therapy.

CONCLUSION(S)

The reviewed clinical studies indicate that *Panchakarma* therapies play an important role in the management of *Sthaulya* (obesity). Procedures such as *Basti*, *Vamana*, *Virechana* and *Nasya* show beneficial effects in reducing BMI, body weight, WHR, body circumference and skinfold thickness. Among these, *Basti* therapies (especially *Bhadradi Asthapana* and *Lekhaniya Basti*) demonstrated comparatively consistent improvements in anthropometric parameters across studies. Allied therapies such as *Udvartana*, *Abhyanga*, *Yogasanas*, appropriate diet and lifestyle modification also contribute to improved metabolism and support weight reduction. These interventions help in correcting *Agni*, reducing *Kapha-Meda* accumulation and clearing *Srotas*, thereby assisting in the overall management of *Sthaulya*.

However, most studies report short-term outcomes with small sample sizes. Therefore, well-designed clinical trials with standardised protocols and long-term follow-up are needed to establish the long-term effectiveness and wider clinical applicability of *Panchakarma* therapies in obesity management.

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