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"PANCHAKARMA IN STHAULYA (OBESITY) AND METABOLIC DYSFUNCTION: CONCEPTS, MECHANISTIC STUDIES AND CLINICAL EVIDENCE"

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ABSTRACT:
Background: Sthaulya (obesity) is described in Ayurveda as a Kapha-predominant disorder closely associated with Prameha. Panchakarma procedures, particularly Vamana, Virechana and Lekhana Basti, are used in its management. **Objective:** To review the classical concepts and recent mechanistic and clinical studies of Panchakarma in obesity and related metabolic dysfunction. **Methods:** Narrative review based on a PubMed search and classical texts. **Findings:** In 19 patients with obesity, Virechana was associated with reduced colonisation of facultative aerobic bacteria and correction of gut dysbiosis. In six participants with a BMI above 30 kg/m2, urinary exosome proteomics showed changes in eight obesity-related hub proteins after Lekhana Basti. In 29 healthy volunteers, escalating oral ghee in the preparatory phase was followed by weight and abdominal circumference reduction without adverse change in total cholesterol, HDL or LDL. A seasonal Vamana study listed obesity and dyslipidaemia among Kapha-origin conditions for which preventive Vamana is advocated. **Conclusion:** Early mechanistic studies are of interest, but all are small and uncontrolled. Controlled trials with body composition and metabolic endpoints are required.
KEYWORDS: Sthaulya, Obesity, Virechana, Lekhana Basti, Gut microbiota, Panchakarma

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INTRODUCTION:

Obesity, metabolic syndrome and diabetes mellitus are increasing globally.[1] In Ayurveda, Sthaulya is described among the disorders of excess, for example in the chapter on eight undesirable constitutions in the Charaka Samhita (Sutrasthana 21), and it is considered to be closely related to the Prameha syndrome, which has Kapha predominance.[1,2] Prameha is described as including conditions involved in obesity, prediabetes, diabetes and metabolic syndrome.[1]

Panchakarma is used for Sthaulya, notably Vamana and Virechana as Shodhana therapies, and Lekhana Basti, a scraping or reducing enema.[2-5] This review summarises the conceptual basis and the recent mechanistic and clinical studies.

MATERIALS AND METHODS:

This narrative review was prepared using a structured but non-systematic literature search. PubMed was searched on 6 November 2026 using combinations of the terms Sthaulya, obesity, metabolic syndrome, Virechana, Vamana, Lekhana Basti, gut flora and Panchakarma. Records were screened by title and abstract, and articles were retained when they described the procedure or condition, its classical rationale, its safety, or clinical outcomes. Classical Ayurvedic texts (Charaka Samhita, Sushruta Samhita and Ashtanga Hridaya) were consulted for conceptual and procedural descriptions. The included studies were heterogeneous (case reports, uncontrolled pilot studies, randomized trials, reviews and trial protocols), so no formal risk-of-bias assessment or meta-analysis was undertaken and the findings are synthesised narratively. The review does not claim exhaustive coverage of the literature.

OBSERVATION AND RESULTS:

1. Conceptual Framework

The Ayurvedic management of Prameha, as summarised in a two-part review, emphasises diet and lifestyle recommendations and herbal preparations according to constitution, as well as attention to psychological factors that contribute to disease.[6] The same review explains that Apatarpana (a balanced diet with restricted calories) is recommended for type 2 diabetes, which has implications for the corresponding approach to Sthaulya.[6]

The authors of a study on seasonal Vamana listed obesity, overweight, dyslipidaemia and diabetes mellitus among the Kapha-origin conditions for which Vamana in spring is advocated as a preventive measure.[3] Panchakarma is therefore positioned both as a therapy and as a preventive strategy in metabolic disorders.

2. Mechanistic and Clinical Studies

Gut microbiota and Virechana: In 19 patients with obesity who received Virechana, stool samples were analysed using ERIC-PCR before and after the procedure; the authors reported reduced colonisation of facultative aerobic bacteria and correction of gut dysbiosis after Virechana and after follow-up, with a reduction in signs and symptoms of obesity.[4] The study provides a hypothesis that changes in gut flora may mediate the effect, but it had no control group and measured only part of the microbial community.

Lekhana Basti and exosome proteomics: In a pilot study of six participants with BMI greater than 30 kg/m2, 18 urine samples were collected at three time points during Lekhana Basti, and extracellular vesicle proteins were analysed by mass spectrometry.[5] Among 210 proteins identified, eight hub proteins associated with obesity were selected; six that were overexpressed in obesity were downregulated after treatment and two increased.[5] The authors regarded the findings as a first step in identifying biomarkers of Ayurveda treatment, and they noted that the study was the first to isolate urine extracellular vesicle protein profiles from obese female participants in India.[5]

Preparatory oleation: In 29 healthy volunteers, escalating doses of cow ghee as Snehapana were followed by significant weight loss and reduction in abdominal circumference; triglycerides and VLDL fell, while total cholesterol, HDL and LDL did not change significantly.[7] These results are relevant because they address concerns that Snehapana may be unsuitable for patients with metabolic disorders, but they concern healthy volunteers and cannot be directly extended to patients.

DISCUSSION:

The studies reviewed here are best viewed as hypothesis-generating. All were small and uncontrolled, and the outcome measures were mostly mechanistic or clinical signs rather than validated body composition and metabolic endpoints.[4,5,7] The study of gut flora and the proteomic study point to biologically interesting pathways (microbial colonisation and urinary extracellular vesicle proteins) that could be studied in larger cohorts.

Future trials should compare Panchakarma with or in addition to structured diet and exercise advice (since Ayurvedic management itself emphasises diet and lifestyle),[6] should measure waist circumference, body composition, glycaemic and lipid markers over at least six to twelve months, and should include microbiome sequencing rather than limited culture-independent fingerprinting. Safety monitoring, including fluid, electrolyte and lipid parameters, remains important, as small studies of Virechana and Snehapana have reported acceptable results.[7,8] Limitations of this review include its narrative approach and single-database search.

CONCLUSION:

Panchakarma is conceptually well suited to Kapha-predominant metabolic disorders, and early studies on gut flora and urinary exosome proteins offer intriguing mechanistic leads. Evidence for clinical efficacy in obesity remains preliminary. Controlled trials with robust metabolic endpoints are needed before firm clinical recommendations can be made.

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