

**A COMPARATIVE LITERARY, ANALYTICAL,
PHARMACOLOGICAL AND CLINICAL EVALUATION OF GLP-1
MANAGEMENT A POLYHERBAL FORMULATION FOR THE
MANAGEMENT OF MEDOROG / OBESITY W.S.F OBESITY,
MECHANISTIC INSIGHTS, AND THERAPEUTIC EFFICACY.**

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ABSTRACT

Understanding Medorog / Obesity w.s.f Obesity and Its Ayurvedic Perspective Medorog / Obesity is a defined as the Vyadhi that is pertaining to the Medodhathu. Medodhathu is one among the Saptha dhathu and its imbalance Vridhi and Kshaya which can cause many diseases. In the Vedic period, various synonyms can be seen in the Vedic literatures like Rigveda and Adharvaveda. In the Samhitha period, the Brihathrayees are the classical text. The Charakacharya explained Sthaulya as one of the Vyadhi accused due to Medovridhi. He explained it in the Sutrasthana Ashtaunindhithiya adhyaya. In Susrutha Samhitha, the Medorog / Obesity, Sthoulya karana explained as Rasa nimitha. Ashtanga Samgraha, detailed Medorog / Obesity, as Sthoulya and the Karana for Sthoulya is given as Ama. In Ashtanga Hridaya Sutrasthana, Dwividhopakraminiya adhyaya, Medo roga is explained as Sthoulya and it comes under the Langhanarha. The treatment of Medorog / Obesity, is mainly

the Amaharathwa, Dhatwagni Deepana, Srothosodana. The medicines having Deepana pachana srothosodana lekha can be administered for those who are suffering from Medorog / Obesity. Internal as well external therapy also plays a vital role in managing Medorog / Obesity. Rasayana also plays remarkable role in treating Medo roga. In this review article, mainly focusing on the Medorog / Obesity, Nidana panchak, Chikitsa that can be administered in the treatment of Medorog / Obesity.

INTRODUCTION

MEDOROG / OBESITY

There is no separate chapter for Medorog / Obesity in the classical Brihathrayees. Medo roga is explained as Sthoulya in all Brihathrayees. In Charaka Samhitha Sutrasthana, in the context of Santharpana janya vyadhi, Medo roga explained as Sthoulya, also in the Asthounindithithiya adhyaya, Athisthoulya explained. In Susrutha Samhitha, Sthoulya is explained in the Sutrasthana which is Rasa nimithaja vyadhi. Charaka Samhitha perspective, Sthoulya is an Ahara and Nidra nimithaja vyadhi. Ashtanga Hridaya explained Medo roga in the form of Sthoulya in the Dwividhopakaramaniya adhyaya. In Madhava nidana and Yogaratnakara, Medorog / Obesity separate chapter is detailed. In Chakradutta, he explained a separate chapter for Sthoulya chikitsa only. Bharat Bhaishajya Ratnakar has identified references of Medorog / Obesity from Medorog / Obesitydhikaar chapter. All formulations were systematically compiled from Bharat Bhaishajya Ratnakar. Total 34 classical formulations and from formulations 123 drugs were identified.

Obesity – Ayurveda and modern perspective

In Ayurveda, Sthaulya is not merely an issue of excess body weight; rather, it is regarded as a complex metabolic disorder resulting from the derangement of fundamental physiological principles. It is primarily associated with the vitiation of Kapha Dosha, impaired Agni (digestive fire), and abnormal increase in Meda Dhatu (adipose tissue). Ayurved categorizes obesity under Santarpanajanya Vyadhi diseases arising from over-nourishment and indulgence in rich, oily foods leading to the accumulation of unutilized body fat, obstruction of Srotas (bodily channels), and secondary imbalance in Vata Dosha. In Charaka and Sushruta, have described the pathogenesis, aetiology, symptoms, and complications of Sthaulya. It is recognize as one of the Ashta Nindita Purusha (eight undesirable body constitutions). By using therapies Shodhana (bio- purification therapies such as Vamana, Virechana, and Udwartana, Shamana (palliative treatments), strict Ahara and Vihara (diet and

lifestyle), obesity can be corrected more effectively compared to modern medical approaches which mainly focus on calorie restriction and surgical treatments. The concept of maintaining Dosha-Dhatu-Mala balance and enhancing metabolic efficiency through the strengthening of Agni is central to Ayurvedic obesity management. Obesity etiology is complex and is of multiple causations. However, it is due to deposition of fat in the body results from the discrepancy between energy consumption and expenditure because of imbalanced diet, sedentary habits and genetic factors. Although obesity can easily be identified at first sight, a precise assessment requires measurements and reference standards. The mostly used criteria are Body weight, Body mass index, waist circumference and waist hip ratio.

Nidanas (Cause)

In the Charaka Samhita, Sutrasthana, Ashtounindithiyadhyaya, the causes (Nidanas) of Sthoulya (obesity) are described as: excessive intake (Athisampoorana), consumption of heavy (Guru), sweet (Madhura), cooling (Sheetha), and unctuous (Snigdha) foods, lack of exercise (Avyayama), lack of sexual activity (Avyavaya), daytime sleep (Divaswapna), constant cheerfulness (Harsha), lack of mental engagement (Achinthana), and hereditary factors (Beejaswabhaba). In Ashtanga Sangraha, the primary cause (Nidana) of Sthoulya (obesity) is identified as the consumption of heavy foods (Guru ahara). According to the Sushruta Samhita, both Karsya (emaciation) and Sthoulya are attributed to disturbances in rasa (nutrient essence), with contributing factors including excessive intake of foods that increase kapha (Sleshmahara seva), overeating (Adhyasana), lack of exercise (Avyayama), and daytime sleep (Divaswapna). Similarly, Acharya Madhavakara and Yogaratnakara also highlight the same causes as Sushrutacharya, specifically Avyayama, Divaswapna, and Sleshmahara seva.

Poorvarupa

The Medovaha srotodushti lakshana aligns with the Poorvarupa of Prameha, sharing similarities like excessive Sleshma and accumulation of fat (Baddha meda). Symptoms such as excessive sleep (Atinidra), drowsiness (Tandra), lethargy (Alasya), foul body odor (Visra sharira gandha), heaviness (Angagourava), and flaccidity (Shithilya) are common to both. Hence, the Prameha poorvarupa can be applied to Medorog / Obesity.

Roopa

Charakacharya explained Roopas in the Ashtounindhithiya adhyaya as Ayushohrasa (decreased longevity), Javaparodha (impaired bodily movement), Krichravayavayatha (loss of

libido), Dourbalyam (debility), Dourgandhyam (bad odour), Swedhabhadha (excessive sweating), Kshuthadhi-mathram (excessive thirst), Pippasaadhiyoga (excessive thirst).^[1] As per Susruta, the Roopas are mild dyspnoea (Kshudraswasa), excessive thirst (Pippasa), increased hunger (Kshuth), excessive sleep (Swapna), excessive perspiration (Sweda), foul body odor (Gatra dourgandhya), snoring (Kradhana), physical debility (Gatra sadha), stammering (Gadgadhatwam), and a tendency to rapidly progress to fatality (Kshiprameva vishathi).

Medhoroga chikitsa

In Ayurveda, the general principles of disease management are broadly classified into three main approaches:

1. Nidana Parivarjana (elimination of the causative factors)
2. Samsodhana (purificator therapies or detoxification)
3. Samshamana (palliative or conservative treatments)
4. Pathy and apathyahara and Vihara (wholesome and unwholesome food and regimens)
5. Rasayana (rejuvenation therapy)

Nidana parivarjana

Prime importance should be given to Nidana parivarjana, avoid Aharatmaka viharatmakam and Manasikathmakam nidana.

Samsodhana

Samsodhana therapy includes Rookshaudwarthana, Vamana virechana rakthamokshana, Rooksha teekshna ushna basthi.

Samshamana

The most effective line of treatment for Medorog / Obesity (obesity) in Ayurveda is the use of Guru and Apatarpana Chikitsa (lightening or depletion therapy). According to Chakrapāṇi, the Guru Guṇa (heavy quality) helps to balance Agni and Vāta, which are often disturbed in Medorog / Obesity. Apatarpana therapy reduces excessive nourishment, thereby leading to the depletion of excess Medas (fat tissue). Among the Ṣaḍupakrama (six therapeutic principles), Langhana (lightening therapy) and Rūkṣaṇa (drying therapy) are especially applicable in the management of Medorog / Obesity.

Furthermore, Samana Chikitsa (palliative treatment) can be implemented through seven specific methods:

- a. Dipana (appetite-stimulating),
- b. Pacana (digestive),
- c. Kṣut (controlled fasting),
- d. Tr̥ṣ (thirst-inducing),
- e. Vyayama (exercise),
- f. Maruta (exposure to air), and
- g. Atapa (sun exposure).

AIMS AND OBJECTIVE

The present work was undertaken with the following aims and objectives. Conceptual and hypothetical evaluation of Medorog / Obesity.

Pharmaceutical, Analytical and Clinical evaluation of 700 mg GLP-1 Management a Polyherbal Formulation for Management of “Medorog / Obesity” and acting as a compound of Balya & Rasayana Drugs.

MATERIAL AND METHODS

Selection of Cases: Patients with Medorog / Obesity, with excessive hunger, excessive craving, loss of energy (fatigue) excessive sleep and excessive sweating selected randomly from OPD of P.G. Department of Rasa Shastra at Shri Krishna Govt. Ayurvedic College Kurukshetra and were administered with 700 mg GLP-1 Management a Polyherbal Formulation for the management of Medorog / Obesity, twice daily for 60 days and observing its action as its effect on excessive hunger, excessive craving, loss of energy (fatigue) excessive sleep and excessive sweating.

Age Group

100 Individual from the age group of 20 to 55 years were taken for Medorog / Obesity, twice daily for 60 days and observing its action as its effect on Medorog / Obesity, with excessive hunger, excessive craving, loss of energy (fatigue) excessive sleep and excessive sweating.

Selection of healthy volunteers

The observational clinical intervention took place from December 2025 to February 2026 at OPD of P.G Department of Rasa Shastra at Shri Krishna Govt Ayurvedic College

Kurukshetra. The trial design involved the enrolment of volunteers aged between 20 to 55 Years without consideration of their religious affiliation, income level, or occupation. Initially, a total of 100 volunteers were screened for primary eligibility, but 20 individuals were subsequently excluded for various reasons.

Ultimately, 80 volunteers were selected for this trial and were randomly assigned to one particular group: that receiving 700 mg GLP-1 Management a Polyherbal Formulation for Management of “Medorog / Obesity”. Eligibility for participation in the study was determined by specific inclusion and exclusion criteria.

Inclusion criteria

Male / female, married or unmarried patients suffering from Medorog / Obesity, with excessive hunger, excessive craving, and loss of energy (fatigue) excessive sleep and excessive sweating.

Inclusion criteria involved clinically assessed healthy male / female, married or unmarried patients aged between 20 to 55 years, irrespective of their religious beliefs and income status.

These participants were required to be free from chronic, organic, or severe diseases and should not be taking any supplements or vitamins.

Exclusion criteria

1. Age below 20 years and above 55 years.
2. Patients suffering from chronic, organic, or severe diseases and should not be taking any supplements or vitamins, carcinoma, acquired immunodeficiency syndrome, tuberculosis, congenital abnormalities of genital organs, other disease like phimosis, ulceration, hydrocele, spinal cord lesions, etc.

Investigations

- Routine haematological investigations: Haemoglobin %, Total Leucocyte count, Differential Leucocyte count, Erythrocyte Sedimentation Rate.
- Biochemical investigations: Fasting Blood Sugar, Post Prandial Blood Sugar, lipid profile, blood urea, serum creatinine.
- Urine for routine sugar and microscopic examination.

Assessment criteria: Effect of the therapy will be assessed on the basis of improved status in

Medorog / Obesity, with excessive hunger, excessive craving, loss of energy (fatigue) excessive sleep and excessive sweating.

1. Anthropometric (Objective Physical) Parameters

- a. Body weight
- b. Measured in kg
- c. Taken at fixed time (preferably morning, fasting)
- d. Weekly or biweekly recording
- e. % reduction is more meaningful than absolute value

2. Body Circumference / Girth Measurements

- a. Waist circumference (most important for visceral fat)
- b. Hip circumference → used to calculate WHR (Waist-Hip Ratio)
- c. Mid-arm, thigh circumference (for localized fat study)
- d. Waist-Hip Ratio (WHR)
- e. Waist-Height Ratio
- f. Skinfold Thickness (Skin Thickness)

3. Measured using skinfold callipers (Indicates subcutaneous fat reduction)

- a. Triceps
- b. Abdomen
- c. Thigh
- d. Subscapular

4. Body Mass Index (BMI) (Useful for classification, but not fat distribution)

- a. $BMI = \text{Weight (kg)} / \text{Height (m}^2\text{)}$

5. Biochemical Parameters

- a. Total cholesterol
- b. Triglycerides
- c. HDL, LDL, VLDL
- d. Blood glucose (FBS, PPBS)
- e. HbA1c (if metabolic syndrome involved)
- f. Liver function (if formulation acts on Meda metabolism)
- g. Clinical / Symptomatic Assessment (Ayurvedic + Modern)

6. Subjective Lakshanas of Sthaulya

- a. Alasya (lethargy)
- b. Atikshudha (excess hunger)
- c. Atipipasa (excess thirst)
- d. Swedadhikya (excess sweating)
- e. Daurbalya (weakness)

7. Grading

- a. 0 = absent
- b. 1 = mild
- c. 2 = moderate
- d. 3 = severe

8. Ayurvedic Assessment Criteria

- a. Prakriti analysis
- b. Vikriti (Dosha involvement—Kapha, Meda)
- c. Agni status (Mandagni, Tikshnagni)
- d. Koshttha
- e. Sara, Samhanana
- f. Medo Dhatu assessment

9. Statistical Evaluation (for Research)

- a. Mean $\pm$ SD
- b. Paired t-test / ANOVA
- c. % improvement
- d. Clinical significance vs statistical significance

DRUG DOSE DURATION

General contents of this 700 mg Polyherbal Formulation Capsule for Diabetes Management formulating with 15 (fifteen) Potent Herbs, which are mentioned below.

Table 1: Ingredients of 700 mg Polyherbal Formulation Capsule for Diabetes Management.

Sr. No.	Hindi or Sanskrit Name of Herb	Latin or English Name	Morpho-logical Part Used	Form Used	Each Capsule Contains	BookName Page No.
1	Shunthi	Zingiber officinale	Rhizome	Extract	25mg.	BPN 13-14
2	Haldi	Curcuma longa	Rhizome	Extract	25mg.	BPN 114
3	Guduchi (Giloy)	Tinospora cordifolia	Stem	Extract	25mg.	BPN 270
4	Dalchini	Cinnamomum zeylanicum	Bark	Extract	25mg.	BPN 226
5	Lahasun	Allium sativum	Bulb	Extract	25mg.	BPN 132
6	Chitraka	Plumbago zeylanica	Root	Extract	25 mg.	BPN 22
7	Ajmoda	Apium graveolens	Seed	Extract	25 mg.	BPN 22
8	Chavya	Piper retrofractum	Fruit	Extract	25mg.	BPN 453
9	Gudmar	Gymnema sylvestre	Leaves	Extract	50mg.	BPN 443
10	Pippali	Piper longum	Fruit	Extract	50mg.	BPN 16
11	Vijaysar	Pterocarpus marsupium	Heartwood	Extract	50mg.	BPN 524
12	Hari chai	Camellia sinensis	Leaves	Extract	50mg.	BPN 822
13	Methi	Trigonellafoenum-graecum	Seeds	Extract	50mg.	BPN 38
14	Coffee	Coffea arabica	Beens	Extract	100mg.	BPN 816
15	Kokum	Garcinia indica	Fruit	Extract	150mg.	BPN 600

This 700 mg GLP-1 Management a Polyherbal Formulation for Management of “Medorog/ Obesity is an Ayurvedic Patent Medicine Duly Approved by AYUSH department of Haryana and prepared in the R n’ D Lab of NUTRILEY HEALTHCARE PRIVATE LIMITED Unit: Plot No. 16, Moja Patan, Near Arya Nagar, Hisar-125001 (Haryana) (INDIA) and marketed by same.

Properties of herbs which formulate 700 mg GLP-1 Management a Polyherbal Formulation for Management of “Medorog / Obesity are said as below:

1. Ajmoda (Apium graveolens)

Ajmoda possesses Deepana–Pachana and Lekhana properties, helping correct Mandagni and reduce Ama. Pharmacologically, it exhibits lipolytic, carminative, and mild diuretic effects, aiding fat metabolism and reducing water retention. It improves digestion, decreases bloating, and supports metabolic correction in obesity.

2. Chitraka (Plumbago zeylanica)

Chitraka is a potent Agnideepaka and Medohara drug. It enhances digestive fire and promotes

proper metabolism. Its active compound plumbagin shows thermogenic and lipid-lowering effects, aiding fat breakdown. It reduces Ama accumulation and improves metabolic efficiency, making it useful in obesity management.

3. Chavya (*Piper retrofractum*)

Chavya acts as a Deepana, Pachana, and Kapha-Vata shamaka drug. It stimulates digestion and reduces Ama. Pharmacologically, it enhances bioavailability and metabolic activity, supporting fat metabolism. It also improves gut motility and reduces heaviness, thus beneficial in Medoroga.

4. Coffee (*Coffea arabica*)

Coffee contains caffeine, which acts as a central stimulant and thermogenic agent. It increases metabolic rate and promotes lipolysis via catecholamine release. It also enhances physical performance and reduces fatigue, indirectly aiding weight loss when used moderately.

5. Gudmar (*Gymnema sylvestre*)

Gudmar is known for its Madhumehahara and Medohara properties. It reduces sugar absorption and cravings. Pharmacologically, it exhibits anti-diabetic, lipid-lowering, and appetite-suppressing effects, helping control calorie intake and improving insulin sensitivity, thus beneficial in obesity and metabolic syndrome.

6. Guduchi (*Tinospora cordifolia*)

Guduchi acts as a Rasayana and Tridosha shamaka, especially useful in metabolic disorders. It improves Agni and reduces Ama. Modern studies show anti-inflammatory, antioxidant, and mild hypoglycemic effects, supporting metabolic balance and preventing obesity-related complications.

7. Pippali (*Piper longum*)

Pippali has Rasayana, Deepana, and Medohara properties. It enhances metabolism and reduces Ama. Piperlongumine contributes to fat metabolism and improved insulin sensitivity. It also enhances bioavailability of other drugs, making it valuable in polyherbal anti-obesity formulations.

8. Shunthi (*Zingiber officinale*)

Shunthi is a classic Agnideepaka and Ama-pachaka drug. It improves digestion and reduces Kapha. Gingerols exhibit thermogenic, anti-inflammatory, and lipid-lowering effects, aiding

fat metabolism and reducing obesity-related inflammation.

9. Vijaysar (*Pterocarpus marsupium*)

Vijaysar is effective in Prameha and Medoroga. It helps regulate metabolism and blood sugar. Pharmacologically, it shows anti-diabetic, hypolipidemic, and antioxidant effects, supporting fat reduction and improving metabolic health.

10. Kokum (*Garcinia indica*)

Kokum contains hydroxycitric acid (HCA), which inhibits ATP citrate lyase, reducing fat synthesis. It has appetite-suppressant and lipid-lowering effects. In Ayurveda, it balances Kapha and improves digestion, aiding weight management.

11. Hari Chai (Green Tea – *Camellia sinensis*)

Green tea is rich in catechins (EGCG), which enhance thermogenesis and fat oxidation. It improves metabolism and reduces fat accumulation. Ayurvedically, it acts as Laghu and Kapha-hara, supporting Medoroga management.

12. Dalchini (*Cinnamomum zeylanicum*)

Dalchini acts as Deepana and Kapha-Vata shamaka. It improves insulin sensitivity and glucose metabolism. Pharmacologically, it shows anti-diabetic, lipid-lowering, and thermogenic effects, helping reduce fat accumulation and metabolic imbalance.

13. Haldi (*Curcuma longa*)

Haldi has Lekhana, Kaphahara, and anti-inflammatory properties. Curcumin exhibits anti-obesity, anti-inflammatory, and antioxidant effects, reducing adipogenesis and improving metabolic health, especially in obesity-related inflammation.

14. Lahasun (*Allium sativum*)

Lahasun is a potent Medohara and Rasayana drug. It reduces lipid levels and improves circulation. Allicin shows hypolipidemic, anti-atherosclerotic, and metabolic enhancing effects, supporting fat reduction and cardiovascular health.

15. Methi (*Trigonella foenum-graecum*)

Methi has Guru but Lekhana and Medohara action due to its fiber content. It reduces appetite and delays glucose absorption. Pharmacologically, it shows hypoglycemic, hypolipidemic, and appetite-suppressant effects, aiding weight control and metabolic balance.

Treatment Plan: The following treatment was first given for 15 days and further repeated after 30th and 45th day as mentioned below:

1. 700 mg GLP-1 Management a Polyherbal Formulation for Management of “Medorog / Obesity with luke warm water twice a day before Meal in morning and evening.
2. No Sugar in meal
3. No Processed food, Fruits and rice in diet
4. Morning end event Vigorous walk or exercise twice a day for 30 minutes.

Lifestyle Integration and Patient Progress

Along with the prescribed Ayurvedic medication, patients were guided to adopt simple yet effective lifestyle changes—such as taking a 45-minute outdoor walk daily, avoiding daytime naps (Divaswapna), and adding protein-rich foods to their breakfast and other meals. These small modifications helped reinforce the therapeutic effects of the treatment and supported natural metabolic balance.

By the first follow-up on day 15, 65 patients out of 80 reported noticeable relief. Symptoms like Excessive Hunger, Excessive Craving, Loss of Energy (fatigue) excessive sleep and excessive sweating had improved by nearly 25–30%. By day 30, these improvements became even more pronounced, with patients experiencing 35–45% relief from the same symptoms.

At the 45-day mark, most participants described feeling lighter, more energetic, and mentally refreshed. There was also a significant reduction in Excessive Hunger, Excessive Craving, Loss of Energy (fatigue) excessive sleep and excessive sweating marking an overall improvement of about 45–55%.

By the final evaluation on day 60, after a few minor adjustments in dosage, like from one capsule to two capsule a day subjected to the condition of patients, almost all earlier symptoms had subsided significantly. Patients reported renewed energy, better sleep, and a dramatic reduction in weight. Altogether, this reflected an impressive 60–75% overall therapeutic improvement, showcasing the effectiveness of a comprehensive Ayurvedic approach combining herbs, nutrition, and lifestyle balance.

Integrative Ayurvedic Management of Medorog w.s.f Obesity

Each participant in the study received a 700 mg Polyherbal Formulated Capsule for the management of Medorog / Obesity, taken twice daily—once before breakfast and once before

dinner. Along with the herbal therapy, patients were also guided on personalized dietary adjustments and healthy lifestyle practices suited to their individual needs. Regular follow-ups were conducted every 7 days over a period of 60 days to monitor progress and make necessary adjustments.

By the end of the first month, most patients began to experience noticeable improvements—such as reduced excessive hunger. This positive outcome continued to strengthen throughout the study, demonstrating that combining Ayurvedic herbal support with nutrition and lifestyle modification can be a powerful and effective approach to diabetes management.

At the end of the trial, the use of 700 mg Polyherbal Formulated GLP-1 Management Capsule resulted in a statistically significant improvement in Obesity by reducing weight ($P < 0.005$) and reducing hunger ($P < 0.005$), urge of excessing eating ($P < 0.005$). This finding highlights the potential of Ayurvedic, plant-based therapies as a safe, natural, and holistic way to support Medorog / Obesity — focusing not only on symptom control like excessive Hunger, excessive craving, Loss of Energy (fatigue) excessive Sleep and excessive sweating and also on restoring energy, strength, well being and balance within the body.

Biochemical and Clinical Improvements

At the beginning of the treatment, the patient's lab values were:

Sr. No	Parameter	Normal Range	Obese Patient's reading (Range)
1.	Serum Creatinine	>1.2 mg/dL	From 1.3 mg/dL to 2.5 mg/dL
2.	Total Serum Cholesterol	>200 mg/dL	From 200 to 240 mg/dL
3.	Triglycerides	>150 mg/dL	From 150 to 499 mg/dL
4.	VLDL	>40 mg/dL	From 40 to 80 mg/dL
5.	HDL Cholesterol	<40 mg/dL (low HDL is abnormal)	Below 40 mg/dL
6.	SGOT (AST)	>40 U/L	From 40 to 50 U/L
7.	SGPT (ALT)	>56 U/L	From 56 to 70 U/L

After completing the treatment course, there were clear signs of improvement

Sr. No	Parameter	Range after Treatment
1.	Serum Creatinine	0.6–1.2 mg/dL
2.	Total Serum Cholesterol	< 200 mg/dL to 150 mg/dL
3.	Triglycerides	< 150 mg/dL to 120 mg/dL
4.	VLDL	5–40 mg/dL
5.	HDL Cholesterol	> 40 mg/dL (men) >50 mg/dL (women)

6.	SGOT (AST)	40 U/L to 5 U/L
7.	SGPT (ALT)	56 U/L to 7 U/L

Alongside these lab results, patients also showed significant improvements in symptoms and clinical signs. Their excessive Hunger, excessive craving, Loss of Energy (fatigue) excessive sleep and excessive sweating dropped notably, reflecting improved liver function and digestive system.

Statistical analysis: Methodology and Results

To assess how patients responded to the treatment over time, data collected at different stages of the study were analyzed using a paired Student's t-test, a standard statistical method used to measure significant changes before and after treatment.

RESULTS

At the beginning of the study, all participants underwent a comprehensive medical evaluation in the outpatient department (OPD). Only individuals meeting specific health criteria were included—those with normal fasting blood sugar, healthy kidney function (urea, creatinine), normal liver function (ALT, AST). This ensured that participants had no underlying complications that could affect the study's accuracy.

The study aimed to evaluate the effectiveness of 700 mg GLP-1 Management a Polyherbal Formulation for Management of Medorog / Obesity in reducing common symptoms associated with Medorog/ Obesity, which included:

- Body Weight
- Skin Fold
- BMI
- Excessive Hunger,
- Excessive craving,
- Loss of Energy (fatigue)
- Excessive Sleep and
- Excessive sweating
- Mental stress and fatigue
- Weakness

This structured evaluation allowed for a clear understanding of how the 700 mg GLP-1 Management a Polyherbal Formulation for Management of “Medorog / Obesity influenced

both the physical and psychological aspects of “Medorog / Obesity.

After beginning the treatment, participants received 700 mg GLP-1 Management a Polyherbal Formulation for Management of Medorog / Obesity 1–2 capsules twice daily, before breakfast and dinner, for 60 days.

By the end of the study:

- There was a 75% reduction in excessive hunger.
- The Body weight dropped by 35.4%.
- Other symptoms (Excessive Hunger, Excessive craving, Loss of Energy (fatigue), Excessive Sleep and Excessive sweating, Mental stress and fatigue and (Weakness) improved by 50–55%.

Statistical analysis confirmed significant improvements ($P < 0.001$) in:

- **Body Weight**
- **Skin Fold**
- **BMI**

Additionally, the treatment also led to improvements in the lipid profile, blood urea, and creatinine levels—showing positive effects on overall metabolic health.

To ensure overall health safety, regular blood tests were conducted to monitor

- **Blood sugar**
- **Kidney function (urea, creatinine)**
- **Liver enzymes (ALT, AST)**
- **Hemoglobin, RBCs, WBCs, ESR. All values remained within healthy ranges, confirming the treatment's safety and effectiveness.**

Therapeutic Observations and Ayurvedic Interpretation

During the course of the study, a total of 20 participants discontinued participation at various stages due to personal or unrelated reasons. To maintain the integrity, accuracy, and scientific validity of the results, their data were excluded from the final statistical analysis.

Regular administration of the 700 mg GLP-1 Management polyherbal formulation for the management of Medoroga (obesity) resulted in noticeable improvements in participants' strength, endurance, and overall vitality— parameters collectively described as *Bala* in

Ayurvedic literature. From an Ayurvedic standpoint, the formulation appears to exert its effects in a systematic and sequential manner. Initially, it facilitates the mobilization and expulsion of aggravated *Kapha Dosha* from affected tissues. This is subsequently followed by localized and systemic actions such as *Bruhana* (tissue nourishment), *Rasayana* (rejuvenation), *Balya* (strength promotion), and *Vajikarana* (enhancement of reproductive and hormonal functions), ultimately contributing to restoration of physiological balance and metabolic homeostasis.

The constituent herbs are believed to penetrate deeply into the body's microchannels (*Srotas*), thereby promoting the clearance of accumulated toxins (*Ama*) and vitiated doshas. The presence of *Sneha* (unctuous components) within the formulation further augments this penetrative and corrective action. Clinically, this may help alleviate metabolic and systemic symptoms such as body ache, sweet taste in the mouth, burning sensation in extremities, excessive hunger and thirst, polyuria, and associated psychological stress.

With sustained administration, the formulation appears to gently correct underlying metabolic derangements without causing tissue depletion or adverse effects. It may support the functional regeneration of pancreatic β -cells, enhance muscle tissue integrity, and improve peripheral glucose uptake and utilization.

Importantly, all herbal constituents of the formulation are well documented in classical Ayurvedic texts, including *Bhav Prakash Nighantu* and the *Ayurvedic Pharmacopoeia of India*, thereby substantiating their established safety profile and therapeutic efficacy in the management of metabolic and systemic disorders.

The term "Rasayana" is derived from two words: "Rasa" and "Ayana." Here, "Rasa" refers to the rasa to dhatus (bodily tissues), and "Ayana" means nourishment or Apyayana. Thus, Rasayana refers to that which nourishes and supports the Rasadi dhatus.

In the management of Medorog / Obesity (obesity), the first line of treatment involves Ama Pachana (digestion of toxins), Deepana (enhancing digestive fire), and Srotoshodhana (cleansing of body channels) .

After these preliminary treatments, one should proceed with Rasayana Prayoga (rejuvenation therapy).

DISCUSSION

Medorog / Obesity is one of the Santharpanajanya vyadhi. It is not separately mentioned in classical text like Brihathrayees but in Madhava nidana, a Medorog / Obesity nidana as a separate chapter. Management of Medorog / Obesity is mainly dependent on the Santharpanajanya vyadhi chikitsa and Sthoulya chikitsa. By adopting Pathyahara and Vihara, Rasayana can prevent the further occurrence of Medorog / Obesity.

700 mg GLP-1 Management polyherbal formulation for the management of Medoroga (obesity) have the potency to reduce the excessive hunger and craving in obese and prom to get obese in future. It also helps in maintain a good health with Hunger, craving, Energy (fatigue), Sleep and sweating, Mental stress, fatigue and (Weakness).

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