



Successful Management of Diabetes Mellitus (*Madhumeha*) With Ayurvedic Modalities (*Vaman & Madhutailik Basti*) – A Case Study

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Abstract: *Ayurveda*, an ancient medical system, is becoming more popular as a supplemental and alternative therapy for treating chronic illnesses. Type 2 diabetes is a chronic condition with serious long-term effects on both the people who have it and the healthcare system as a whole. *Ayurvedic* classics have twenty types *PramehaKaphaj prameha* 20, *Pittaja prameha* 6, and *Vataja prameha* 4. Among this type, Diabetes mellitus is compared with *Madhumeha*, which is one of the *Vataja* types of *Prameha*. It is a *Kledapradhan vyadhi* which is associated with excessive urination. The primary causes of the illness are an excessive intake of dairy products, sugar products, rice, and seafood, an excessive amount of sleep, and a lack of activity. Various complications of Diabetes mellitus include nephropathy, neuropathy, retinopathy, and cardiovascular disease. A 51-year-old female patient visited OPD with chief complaints of Sweetness in her mouth, excessive hunger, thirst, urine, and burning sensation at the sole for more than 3 months, and other associated complaints were excessive mental stress and lethargy for the last 1 month. She was treated with *panchakarma* treatment like *Vaman*, *Madhutailik basti*, and *Shaman chikitsa* like *Nishamalaki churna* and *Madhunashini vati*. Reduction in blood sugar level was observed at the end of treatment. Hence it can be concluded that *shodhan* and *shaman chikitsa* is beneficial in treating symptoms of *Madhumeha*.

Keywords: *Madhumeha*, Diabetes Mellitus, *Vaman*, *Madhutailik basti*, *Shaman Chikitsa*

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Received On 18 February, 2023

Revised On 1 June, 2023

Accepted On 16 June, 2023

Published On 1 September, 2023

Funding This research did not receive any specific grant from any funding agencies in the public, commercial or not for profit sectors.

Citation Khushhali Balpande and Sadhana Misar Wajpeyi , Successful Management of Diabetes Mellitus (*Madhumeha*) With Ayurvedic Modalities (*Vaman & Madhutailik Basti*) – A Case Study.(2023).Int. J. Life Sci. Pharma Res.13(5), L241-L248
<http://dx.doi.org/10.22376/ijlpr.2023.13.5.L241-L248>

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Int J Life Sci Pharma Res., Volume13., No 5 (September) 2023, pp L241-L248



I. INTRODUCTION

Type 2 Diabetes is defined as a disruption in carbohydrate metabolism, which exhibits a chronic continuous higher level of sugar in the body mostly due to decrease insulin production or reduced sensitivity for insulin.¹ It is characterized by various etiological factors associated with the improper functioning of beta cells.² Type 2 Diabetes Mellitus development occurs gradually because of insulin resistance in skeletal muscles where glucose uptake is condensed. Thus it increases insulin secretion from beta cells as a compensatory function. Failure of peripheral glucose utilization increases its level in the blood leading to hyperglycemia.³ According to (WHO) World Health Organisation, people had diabetes 16.01, 19.4, 13.9 million in China, India, USA in 1995, which will increase to 37.6, 57.2, and 21.9 million, respectively, in 2025. The prevalence rate of DM-2 will increase from 135 Million to 300 million by twenty-five. It has been estimated that it affects approximately 200 million people worldwide.⁴ In the urban population, 11.6% have diabetes as a lifestyle disorder, and 2.4% in rural areas. World Health Organisation estimated that by twenty-thirty, 79.9 million Indians would have diabetes. India is regarded as the diabetes capital of the world by the International Diabetic Federation since every fifth adult worldwide is an Indian.⁵ Prevalence rates in India are Chennai – 18.6%, Hyderabad - 20.7%, Bangalore – 17.8%, Delhi- 21 % cases by Urban Diabetic Survey(National),2005.⁶ Ayurvedic physicians identified Diabetes mellitus as *Madhumeha* because ants are attracted to the urine of diabetic patients. It is a subtype of *Prameha* that is called *Vataja*. It is known as *Mahagada* in Ayurveda.⁷ Ayurvedic scriptures refer to "*prabhootavila mutrata*," or the excretion of significant amounts of turbid urine, as the primary symptom of the illness *Prameha*.⁸ It is a *Tridoshaja Santarpanajanya Vyadhi*. According to *Acharya Sushruta*, overindulging in etiological elements causes *aparipakva vata*, *pitta*, and *kapha* to become vitiated, mixing with *medodhatu*. Through the *mutravaha srotas*, these vitiated *dhatu* and *dosha* descend and localize at the bladder, resulting in *Prameha*.⁹ According to Ayurveda, *Madhumeha (Vataja Prameha)* is *asadhya*, incurable yet treatable. Ayurvedic treatment plans include *Pathya aahara vihara*, *Shodhana chikitsa*, and *Shamana chikitsa* (the use of anti-diabetic medications) & (lifestyle modification). Comparable to Type I Diabetes Mellitus is the *Apatarpanajanya Madhumeha*, while Type II Diabetes Mellitus is the *Santarpanajanya Madhumeha*. The primary *Avaraka* in *Madhumeha* is *Kapha*, *Pitta*, *Rasa*, *Mamsa*, and *Meda*, with *Meda* predominating among these. The surplus liquid, known as vitiated *Kleda*, transforms into *Mutra* and *Kapha*, as well as *Meda*, and *Kleda* covers the apertures of the *mutravaha Srotasa*, producing *Madhumeha*.¹⁰ *Sthula madhumehi* (Type II D.M.) should be treated with detoxification, according to Charak. Internal *Snehan* should be performed first to control *Vata Dosha*. *Vamana* eradicates the *Avaraka doshas* (i.e., *kapha* and *pitta*) in a more direct manner.¹¹ Following medicinal oil or *ghrita* consumption, *Teekshna Vamana Karma* should be performed, considering the patient's strength, according to *Vagbhata* and *Sushruta*.¹²⁻¹³ *Panchakarma* therapy has been recommended for *Sthula Madhumeha* patients before the *Shamana* drug administration since the severely vitiated *Doshas* cannot be improved by *Shamana Chikitsa* (pacification of doshas) alone. "*Bahudravah Slesmaa Doshavishesah*" states that *Drava rupa kapha* is the primary *Avaraka* and the cause of *Prameha*.¹⁴ Hence, the proper *Shodhana* technique for Type II Diabetes Mellitus is *Vamana*. *Madhutailka Basti* aids in

preserving the homeostasis of the body's tissues by nourishing all *Dhatu*, including *Mansa-Majja* and *Shukra*, and by preventing *Dhatupaka* from preventing the loss of *Ojas*. This gives the *Dhatu*s more vigour at the cellular level and boosts cellular uptake.¹⁵ Despite providing a choice of efficient treatment options for diabetes mellitus, modern medications can have several side effects, including hypoglycemia. Adverse side effects of increased sugar levels associated with various complications can be prevented by targeting hyperglycemia and oxidative stress.¹⁶ The traditional Indian medical system of Ayurveda provides a comprehensive multi-modality approach to treating diabetes.

1.1. Ethical statement

This case study was performed on a single patient, so ethical committee approval was not done. Permission from the institute and informed written consent was taken from the institute and patient for conducting and publishing the case study.

2. CASE REPORT

A female patient, 51 Years of age, visited OPD with chief complaints of Sweetness in her mouth, excessive hunger, thirst, urine, and burning sensation at the sole for more than 3 months. Other associated complaints were excessive mental stress and lethargy for 1 month.

2.1. The present history of illness

The patient was normal 3 months back, and then she started complaining of a sweet taste in her mouth with excessive salivation, thirst, hunger, increased urine frequency, mental stress, and lethargy. Gradually developed a burning sensation in the sole. On investigation, her blood sugar level was increased, for which she was on metformin 500mg, but the patient wanted to shift to Ayurvedic treatment; hence she got admitted to our institute for further management.

• History of illness

Type 2 Diabetes Mellitus since 3 months (metformin 500mg)

• Family history

Mother - Type 2 Diabetes Mellitus

• Personal history

Ahara- intake of junk food, fatty and extra oily diet.

Vihara- sedentary lifestyle

Nidra –afternoon sleep (2hrs)

Vyasana: no addictions

2.2. Clinical Examination

Vital parameters.

Temperature- Afebrile

Pulse rate - 70 bpm

Blood pressure -120/70 mm Hg

body weight – 68.2kg,

height -154 cm

BMI - 28.8 Kg/m².

2.3. Ashtavidha Pariksha (Eightfold Examination)

- The patient *nadi* 74 per minute, *Mala-Vibandha*, *Mutra-aavilmutrata bahumutrata*, *Jihwa- saama*, *Shabda – spashta*, *Sparsha –anushnasheet*, *Druka –prakrut*, *Akriti–sthula*

2.4. Dashvidhpariksha (Tenfold Examination)

- Prakruti- Kapha-vataja
- Vikruti- rakta, ambu, vasa, rasamedha, lasika, majja, oja, mamsa, shukra
- Sara- madhyama (average)
- Samhanan- madhyama (average)
- Praman- body weight – 68.2kg, height -154 cm, BMI - 28.8 Kg/m².
- Satmya- madhyama (average)
- Satva- madhyama (average)

2.6. Investigations

Table 1: Investigation Report	
Investigations	Before treatment (10/09/2022)
FBS level	175 mg/dl
PPBS level	295 mg/dl
Glycosylated haemoglobin (HbA1c)	8.4%
Serum Cholesterol	190mg/dl
Serum Triglyceride	150mg/dl
Serum HDL	70mg/dl
Serum LDL	130mg/dl
Serum VLDL	30mg/dl

Table no 1 Illustrates the investigation reports of the patient regarding blood sugar level and Lipid profile before the treatment was started.

2.7. Diagnosis

Based on the above investigation, the patient was diagnosed with *Madhumeha* (Diabetes mellitus type-2).

2.8. Treatment objective

The treatment objective was to eliminate aggravated *dosha* and reduce the symptoms of *Prameha*.

- Ahar shakti-pravara
- Vyayam shakti- avara (poor)
- Vaya- vri dhaavastha

2.5. Systemic examination

All systemic examinations like Respiratory system examination, Central Nervous System Examination, Cardiovascular examination, Gastrointestinal examination, and Locomotor examination are within normal limits.

2.9. Treatment Given

a. *Vamana karma* b. *Madhutailik Basti with Shamana chikitsa*

a. *Vaman karma*

The patient was examined for *dosha, bala, agni, and prakriti* for fitness of *Vamana*, and written consent was taken before starting the procedure. *Vamana* was planned early at 7 am in three steps-*Purva Karma* (preoperative preparation), *Pradhana Karma* (administration of *Vaman*) *Pashchat Karma* (post-operative care), as shown in Table no. 2

Table 2: Overall Treatment Plan				
Date	Procedure	Medicine	Dose	Duration
10/9/2022-12/9/22	<i>Deepana Pachana</i>	<i>Chitrakadi Vati</i>	2 tab twice a day with warm water before food	3 days
13/9/22-17/9/22	<i>Snehapan</i> (consumption of medicated ghee) in increasing quantity	<i>Trikantakadya ghrit</i>	Day1- 30 ml Day2-60 ml Day3-90ml Day4-120ml Day5-150 ml	7 days
18/9/22-19/9/22	<i>Sarvanga Abhyanga</i> with <i>til taila</i> followed by <i>sarvanga swedana</i>		On Day 6 and Day 7	2days
19/9/22	<i>Vaman</i>	<i>Madanphalayog</i>	<i>Madanphala</i> 5gm <i>pippali</i> 2gm <i>vacha</i> 2gm <i>saindhava</i> 2gm honey Q.S. with 2-litre milk, <i>Yastimadhupant</i> 2 litre 2 litre <i>lavanajal</i>	45 min
19/9/22	<i>Dhumapana</i> (medicated smoke) <i>Gandusha</i> (gargling)	With <i>Dhumavarti</i> With <i>Koshna Jala</i>	Mouthfull quantity	For 3-5min. 3 cycles
19/9/22-23/9/22	<i>Samsarjan krama</i>	<i>Mudga Yushadi karma</i>	Morning and evening, two times	5 days

Basti, Along With Shaman Aushadhis				
24/9/22-1/10/22	Madhutailik basti	530ml	-	8 days
Shaman aushadhis				
24/9/22-8/11/22	Nishamalaki churna	3gm	Twice a day (before meal)	Lukewarm water
	Madhunashani vati	250mg	Twice a day (before meal)	Lukewarm water

The patient was assessed for *vegiki* (number of bouts), *maniki* (number of quantity), *Antiki* (Pitta at the end of *vamana*), and *Laingiki* (signs and symptoms), four criteria for proper *vamana* mentioned in *Samhita*.⁷ Table no 2 Illustrates the complete treatment plan of the patient, which include *Poorvakarma*, *Pradhankarma*, and *Paschat karma* of *Vaman*, administration of *Madhutailik basti*, and *shaman aushadhis*.

b. Madhutailik Basti with Shaman Chikitsa

Bhavaprakasha¹⁷ is used as a source of information for the study and has the following elements:

S.No.	Contents	Quantity
1.	Madhu	50ml 100gm
2.	Saindhav Lavan	3.125gms 5gm
3.	Tila Taila	100ml 50ml
4.	Shatapushpa Kalka	6.25gms 10gms
5.	Erandamool kwath	320ml 100ml

In addition to the mentioned treatment, the patient was instructed to take *Amla* juice (20ml) and *Haridra churna* (1g) in the morning, go for a daily hour-long stroll outside, and refrain from *divaswapna*, or sleep during the day. Table no 3 Illustrate the ingredients of *Madhutailik basti* mentioned in *Bhavprakash*, along with the number of contents.

2.10. SOP of Madhutailik Basti

In the *Khalva Yantra*, 100 grammes of *Madhu* and 5 grammes of *Saindhava Lavana* are first added and triturated to create a homogeneous mixture. Continue to triturate until *lavan* is completely mixed. Gradually 100ml of *Til Tail* is mixed with the above mixture. Further, 10g of *Shatapushpa Kalka* is added to the mixture. The particles of *Kalka* should be uniformly mixed. In the end, 320ml *Erandamula Kwath* is added, and trituration is continued until it gets completely dissolved with globules. A total quantity of 530ml of *Basti* is given to the patient.

2.11. Posology

Medicine -*Madhutailika Basti*
Dose -530 ml
Duration -8 days
Kala -Prataha (Abhakata)
Type of *Basti* -*Niruhavata*

2.12. Pre-Basti management

Sthanika snehana, or local external oleation with sesame oil, and *Sthanika nadi swedana*, or local sudation with steam, were

performed over the abdomen and gluteal area on the day of *Basti* and were administered on an empty stomach.

2.13. Procedure of Basti

The patient was instructed to lie on a table in the left lateral position, with his left leg straight and his right leg bent at the hip and kneeling up to his chest. For *Madhutailik Basti*, *Basti netra* (Rubber catheter) was attached to *bastiputaka* (enema pot). The column of the catheter was filled with *Madhutailik Basti*, and air was evacuated. Sesame oil was applied to the anal hole and catheter tip, and 4 fingers (~ approximately 4"-6") of rubber catheter were placed per rectum. The patient was told to take a big breath. The enema pot was then raised, allowing *Basti* to enter the rectum while leaving only a small amount behind.

2.14. Post-Basti procedure

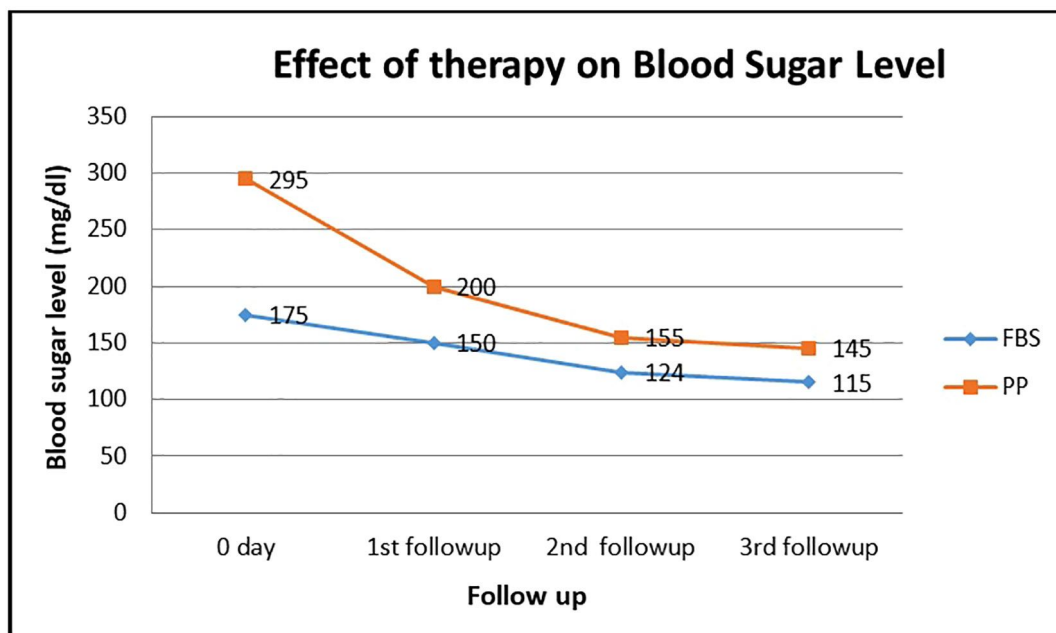
After administration of *basti*, tapping of the gluteal region is done. The patient is asked to lie supine until the *basti pratyagaman kala* (expulsion of *basti*). After *Basti pratyagamana*, the patient was advised to take a bath with warm water, and a light diet was advised.

3. RESULTS AND OBSERVATIONS

This study shows the effect of *Shodhan (Vaman, Madhutailik bast) chikitsa* and *Shaman chikitsa* in lowering the blood glucose level in this patient, as shown in Table no 4.

Follow Up	FBS level	PPBS level
On first day [10.9.22]	175 mg/dl	295mg/dl
I st Follow up (after <i>Vamana</i>) [23.09.22]	150 mg/dl	200mg/dl
Follow up-(after <i>Basti</i>) [1.10.22]	124 mg/dl	155mg/dl
Follow up [8.11.22]	115 mg/dl	145mg/dl

Table no 4 Illustrates the investigation reports before the treatment, after the *vaman* procedure (follow-up 1), after *Madhutailik basti* (follow-up 2), and last follow-up (after *shaman chikitsa*).



Graph I - Effect of Therapy on Fasting and Post Prandial Blood Sugar Level

Graph I shows the effect of *Shodhan (Vaman, Madhutailik basti) chikitsa* and *Shaman chikitsa* in managing blood sugar levels.

Parameters	Normal (0)	Mild(1)	Moderate (2)	Severe (3)
<i>Dourbalyata</i> (Weakness)	Regular activities	Weakness on walking	Weakness in Regular activities	Difficulty in regular activities
<i>Daha</i> (Burning Sensation sole)	No	Occasional	Continuous	Persistent
<i>Bhrama</i> (Vertigo)	No	Occasional	Difficulty in working	Continuous
<i>Anidra</i> (Insomnia)	6-7hrs	6-3 hrs	4-2 hrs	>2hrs
<i>Kandu</i> (Itching)	No	Rashes over upper and lower limbs	Rashes all over the body	Continuous itching
<i>Mutra Vridhi</i> (Polyurea)	Freq 3-4 times	5-9 times	8-12 times	>11 times
<i>Kshudha vridhi</i> (Polyphagia)	Eating 2 times per day	3-5 times	4-6 times	>8 times
<i>Pippasa vridhi</i> (Polydypsia)	Freq 3-5 times	4-8 times	9-13 times	>13 times

Table 5 illustrates the criteria for assessing subjective parameters according to the severity index.

S.no	Symptoms	0 day	60 th day
1	<i>Dourbalyata</i> (Weakness)	2	0
2	<i>Daha</i> (Burning Sensation sole)	2	0
3	<i>Bhrama</i> (Vertigo)	1	0
4	<i>Anidra</i> (Insomnia)	1	0
5	<i>Kandu</i> (Itching)	1	0
6	<i>Mutra Vridhi</i> (Polyurea)	3	1
7	<i>Kshudha vridhi</i> (Polyphagia)	3	1
8	<i>Pippasa vridhi</i> (Polydypsia)	3	0

Table 6 illustrates the effect of *Vaman, Madhutailik Basti, and Shaman Aushadhis* on the Subjective Parameters.

4. DISCUSSION

The roots of the word *Prameha* are *Pra*, which denotes excess, and *Meha*, which signifies the passing of urine.

Prameha is urinating more than usual, and the urine is turbid ('*prabhootha avila mootrata*').¹⁸ The main contributing causes include excessive consumption of cold, unctuous, sweet, and fat-rich foods and beverages, sleeping throughout the day, a

lack of exercise, laziness, and sedentary behavior. Due to etiological factors, there is an increase in *Kapha*, which reaches various *Dushyas* like *Rasa* (plasma), *Rakta* (blood), etc. It spreads throughout the body and becomes vitiated because of the body's propensity for fluid and looseness; then, it combines with medas (fat adipose tissue), mamsa (muscle), and kleda (body fluids). Vitiating *Pitta*, *Vata*, and body fluids draw them to the urinary bladder and produce *Prameha*.^{19,20} *Charaka* describes the prognosis as curable, palliable, and incurable. Patients with early diagnosis of diabetes along with obesity are curable. However, medication can control certain types of *Kaphaja pramehas* and the incurable form of diabetes known as *vataja*.²¹ The drugs in modern medicine has a good mode of action but leads to various side effects in the body; hence *Ayurvedic* modalities help in stabilizing the vitiated *Kapha* and treat the disease from the root cause. They improve fat and carbohydrate metabolism.²² In *Ayurvedic* treatment, *Shodhan* procedure like *Vamana*, *Madhutailik Basti*, and *Shamana* medicines helps improve the patient's condition by increasing the digestive strength, which is the root cause of most diseases. This case study gave interventions in the form of *Shodhan* (*Vamana*, *Madhutailik basti*) and *Shaman Chikitsa* (*Nishamalaki churna*, *madhunashini vati*).

4.1. Mode of action of Vamana

The *Vamak Dravyas* affect the stomach at its most fundamental level of *Kapha* vitiation. It removes *Kleda*, opens *Srotas*, and removes *Ama*, providing great relief for *Kapha*, the primary factor of diabetes. *Vamana Karma* is the practice of inducing emesis, which aids in the body's detoxification, particularly through the intestines or upper body parts. *Vamana Karma* is typically divided into two categories: *Mridu Vamana* (mild *Vamana*), and *Tikshna Vamana*, depending on the severity of the treatment. In this case, *Mridu Vamana* is given to the patient. *Poorvakarma*, *Pradhanakarma*, and *Pashchatakarma* are the three steps of *Vamana Karma*. *Deepan-Pachan* is given with *Trikatu churna*, which leads to the digestion of *aam* and alleviates *Kapha* and *Meda*.²³ Before practicing *Vamana Karma*, fomentation and oil massage are advised to liquefy *Dosha* and transfer toxins from *Shakha* to *Koshta pradesha*. The medicated ghee decreases insulin resistance at the cellular level and the fatty acids circulating in the blood. Due to the *Tikshna*, *Ushna*, *Vikasi*, and *Sukshma* qualities of *vamak* drugs, it circulates through the vessels and thus liquefies the *doshas*, which are compact and adhered tightly to the *Srotas*. It gradually pacifies the *Doshas* of *Sukshma* and *Sthula Srotases*. These pacified and Separated *Doshas* are brought to *Aamashya* due to *Poorvakarma* of the *Vaman* procedure (like *deepana*, *Pachana*, *Snehana*, and *Swedana Karma*) and with the action of drugs. The predominance of *Vayu* and *Aakash Mahabhuta* in *Vamaka* drugs stimulates liquefied *Doshas* from *Aamashya*. *Urdhuvbhaghara's* drug action ultimately leads to *Doshas's* migration towards upper body parts, and hence *Vamana* takes place.²⁴ Here, *Vamana* improves glucose absorption by reducing peripheral insulin resistance in the muscles (*Bahudravasleshma*). Lowering the amount of circulating free fatty acids helps insulin activity.²⁵ Plasma Cortisol level increases after *Vamana karma*. This increases cortisol levels causing hyperglycemia by stimulating increased protein catabolism with increased amino acids in plasma and gluconeogenesis. This raised glucose & amino acid stimulates insulin secretion (synthesis of more insulin & release of the stored insulin from β cells) by substrate regulation, which is a

secondary effect.²⁶ When the medications employed in *Vamana* enter the stomach, they stimulate the gastric mucosa, sympathetic nerve fibers, and vagus nerve. Since both sympathetic and parasympathetic nerve fibres supply the islets cells, vagus (parasympathetic) nerve fibres are stimulated by *vamana karma*, which induces stimulation of receptors and insulin secretion under neural control. Again, the *GIT* and stomach muscles are stimulated by these medicines, which also increase diaphragm peristalsis and release *GIT* hormones such as cholecystokinin, gastrin, secretin, and pancreozymin. Through hormonal regulation, these hormones encourage the release of insulin.²⁷

4.2. Mode of Action of Madhutailik Basti

Due to the vitiation of the *mamsa*, *meda*, *rasa*, and *ojas*, *madhumeha* is one of the *kapha* and *kleda* dominant diseases. *Madhu*, *til taila*, *saindhav*, *shatpushpa*, and *erandamoola* are the primary components of *Madhutailik Basti*. Due to its function as a *yogavahi* (drug carrier), *madhu* travels to tiny channels (*sukshma srotasa*) and boosts the potency of *basti*. *Tila taila* is *ushna* (hot), *madhura* (sweet), and *snigdha* (unctuous) in nature. It lessens the *laghu* (easy to digest) and *ruksha* (dry) qualities of *vata*. *Laghu* and *Snigdha Guna* belong to *Saindhav*. *Erandamula's* nature is *vata-kaphaghna*; it enters microchannels and causes the *dosha* to liquefy. The majority of this *basti's* contents are of a *vata-kaphaghna* type. *Agni* functions are disrupted in *medoroga*, resulting in faulty *dhatu* formation and only excessive *meda dhatu* formation. Due to its *vata-kaphaghna* character, *madhutailika basti* aids in *medoroga* and also cleanses the channels. The nature of *Madhu* and *Tila Taila* is *medohara*. As a result, they aid in disrupting pathogenesis. By nourishing every *Dhatu* tissue, including *Mansa-Majja* and *Shukra*, and by preventing *Dhatupaka* from preventing loss of *Ojas*, *Madhutailika Basti* aids in preserving the homeostasis of the body's tissues. This gives the *Dhatu* more vigour at the cellular level and boosts cellular uptake.²⁸ *Madhutailik basti* eliminates circulatory waste products to treat vitiated or exacerbated *doshas*, increases digestive capacity, purifies *Koshta* and removes constipation, and strengthens the host's defense mechanism without increasing the sugar level. Due to its immunomodulatory action, it produces better *dhatu* and *updhatus*, raises body resistance by maintaining tissue regeneration, boosts the body's strength (*adaptogenic activity*), and promotes the healthy operation of neural tissue (*improved microcirculation through modulation of macrophage function*).²⁹

4.3. Mode of action of Nishaamalaki Churna

Emblica officinalis and *Curcuma longa*, two *Ayurvedic* herbs, are combined in equal amounts to create the *Nisha Amalaki churna*.³⁰ *Amalaki* has a revitalising effect and is a great antioxidant. It promotes the body's glucose metabolism, lowers stress levels, and boosts immunity. *Samhitas* claim that *Amalaki-Emblica officinalis* predominates *Amla rasa* in all five *Rasas* except *Lavana rasa*. *Vipaka* is *madhura* and *Shita virya*, possessing qualities of *Ruksha*, *Guru*, and *Shita*. *Haridra*, *curcuma longa* possesses *Ruksha*, *Laghu*, *Tikta*, *Vipaka* is *katu*, and *Ushna virya* characteristics. These characteristics allow it to function as a *kaphaghna*, and *kledahara*, and improve glucose metabolism. Specifically, the combination of *Nisha Amalaki Churna* possesses *Kaphahara* property, though it also has *Tridosahara* property. Its actions on vitiated *Kapha*, *Meda*, and *Kleda* can improve

Saptadhatus quality and decrease Dhatu's shaithilya. Nisha Amalaki Churna decreases the amount of Ama and Kleda in the body by working on Dhatwagni and Jatharagni due to its Deepan and Pachan characteristics. It raises Dhatwagni, which aids in restoring a disrupted metabolism. It affects Srotodushti and glucose metabolism by Deepan, Pachan, and Anuloman characteristics. This Kalpa produces Kleda Shoshana because of its Ruksha Guna, which helps to break Prameha's Samprapti.³¹

4.4. Mode of Action of Madhunashini Vati

Madhunashini Vati is herbo-mineral formulation mentioned in *bhaishajya ratnavali* containing *shilajatu, swarna makshik bhasm, lauha bhasma, tikta rasatmak dravyas like Guduchi, Katuki, Nimba, triphala*, etc. The substances above have anti-diabetic and hypoglycemic properties, making them useful for managing diabetes mellitus. Vaman, madhutilik basti, and shaman aushadhis have kapahhara, deepan, pachan, anulomana, srotoshodhan, medohara, kledahara properties which lead to reduce the level of sugar in blood from 176 mg/dl to 115mg/dl (fasting blood sugar) and post prandial level of sugar from 294mg/dl to 145 mg/dl. There was a reduction in the severity index in subjective parameters like weakness, vertigo, Tingling numbness, polyuria, ploydypsis, and polyphagia, as shown in Table 4.

5. CONCLUSION

Madhumeha, a multifactorial silent killer, must be treated immediately. The information above leads to the conclusion that Ayurvedic therapy of Madhumeha can be accomplished through proper use of Shodhan treatment, Shamana

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aushadha, and adherence to proper dietary practices and lifestyle adjustments. Therefore, this shodhan chikitsa performed by a shaman is very beneficial in managing Prameha. Still, more research using larger samples and a longer time frame is needed to confirm this impact.

6. DECLARATION OF PATIENT CONSENT

The authors attest that they have all necessary patient permission paperwork on file. The patient has indicated in the form that he is comfortable with his clinical data being written about in the journal. The patient knows that reasonable measures will be made to keep their identity a secret and their name and initials from publication; anonymity cannot be assured.

7. INFORMED CONSENT

A written informed consent form was taken from the patient before starting treatment and for publication in the esteemed journal.

8. AUTHORS CONTRIBUTION STATEMENT

Acknowledge Dr. Sadhanamisar for giving appropriate guidance regarding the diagnosis and treatment of the patient and Dr. Praveen Nandal for assessing the patient, gathering relevant data, and taking appropriate follow-ups of the patient.

9. CONFLICT OF INTEREST

Conflict of interest declared none.

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