



## AYURVEDIC MANAGEMENT OF PRAMEHA (DIABETES): A CASE STUDY

Acharya Manish<sup>1</sup>, Dr. Gitika Chaudhary<sup>2\*</sup>, Prof. Ish Sharma<sup>3</sup>, Dr. Richa<sup>4</sup>, Dr. Harendra Singh<sup>5</sup> and Dr. Srijan Chaudhary<sup>6</sup>

<sup>1</sup>Director, Meditation Guru, Jeena Sikho Lifecare Limited.

<sup>2</sup>Senior Consultant, General Surgeon, BAMS, PGDIP, PGDGS, MS (Ayurveda), Jeena Sikho Lifecare Limited.

<sup>3</sup>Senior Consultant, MD, PhD (Ayurveda) Jeena Sikho lifecare Limited.

<sup>4</sup>Research officer, BAMS, PGDIP, CICR, CAIM, Jeena Sikho Lifecare Limited.

<sup>5</sup>Consultant, BAMS, Jeena Sikho lifecare limited Hospital, Agra, Uttar Pradesh.

<sup>6</sup>Writer, BAMS, Jeena Sikho Lifecare Limited.



\*Corresponding Author: Dr. Gitika Chaudhary

Senior Consultant, General Surgeon, BAMS, PGDIP, PGDGS, MS (Ayurveda), Jeena Sikho Lifecare Limited.

Article Received on 20/05/2025

Article Revised on 11/06/2025

Article Accepted on 01/07/2025

### ABSTRACT

A 38-year-old male presented at Jeena Sikho Lifecare Limited Hospital in Agra, Uttar Pradesh, India with symptoms such as *Bahumutrata* (polyuria), *Atibhojana* (Polyphagia), *Atipipasa* (Polydipsia), *Vibandha* (constipation), and *Tanava* (stress), indicative of *Prameha* as per *Ayurvedic* texts. A detailed clinical examination was conducted, and an investigation of HbA<sub>1C</sub> revealed significantly elevated levels, supporting a diagnosis of Type 2 Diabetes Mellitus (T2DM). Recognizing the risks of long-term complications such as Chronic Kidney Disease (CKD) and Coronary Artery Disease (CAD), a comprehensive treatment plan was initiated. The first line of management focused on dietary regulation and lifestyle modification to help non chemically controlled blood glucose levels. Complementing this, *Ayurvedic* medications containing herbs such as *Triphala* (*Emblica officinalis*, *Terminalia bellerica*, *Terminalia chebula*), *Shilajit* (Black Bitumen), *Ashwagandha* (*Withania somnifera*), *Guduchi* (*Tinospora cordifolia*), *Neem* (*Azadirachta indica*) and *Karela* (*Momordica charantia*) were prescribed. These herbs are known for their antidiabetic, antioxidant, and immunity-enhancing properties and the patient himself decided to discontinue Tablet Metformin after starting *Ayurvedic* treatment since 20<sup>th</sup> December 2024. After two months of this *Ayurvedic* treatment approach, the patient showed a marked improvement in the HbA<sub>1C</sub> levels, consistent improved Fasting Blood Sugar (FBS), Post Prandial Blood Sugar (PPBS), and reduced clinical symptoms. The patient reported better glycemic control and overall health improvement.

**KEYWORDS:** *Ayurveda*, Diabetes, Post Prandial Blood Sugar (PPBS), *Prameha*, *Pathya-Apathya*, *Oja* (immunity).

### INTRODUCTION

**Diabetes** is a chronic metabolic disease marked by elevated levels of blood glucose, which, over the time, can lead to serious damage to heart, blood vessels, eyes, kidneys, and nerves.<sup>[1]</sup> The most common form is type 2 diabetes mellitus, typically seen in adults. It occurs when the body becomes resistant to insulin and/or does not produce enough insulin to maintain normal blood glucose levels.<sup>[2]</sup> In 2019, it was estimated that 77 million people in India were living with diabetes. This number is projected to rise sharply, reaching over 134 million by 2045, posing a significant public health challenge for the country.<sup>[3]</sup> In type 2 diabetes, persistently high blood glucose levels overwhelm the kidneys' ability to reabsorb glucose, causing the glucose transporters in the nephrons to become saturated. This leads to osmotic diuresis,

resulting in symptoms such as polyuria (frequent urination) and polydipsia (excessive thirst), particularly when serum glucose levels exceed 250 mg/dL<sup>[4]</sup> although individual responses may vary. Insulin resistance, a hallmark of type 2 diabetes mellitus, which impairs glucose transport into cells and accelerates fat breakdown, which might lead to ketosis.<sup>[5]</sup> In response to the inadequate insulin action or production, the body paradoxically increases glucagon secretion, which stimulates further glycogen release from liver and worsens hyperglycemia.<sup>[6]</sup> Although insulin resistance plays a major role in the disease, the full development of type 2 diabetes occurs when insulin production is no longer sufficient to compensate for this resistance, leading to chronic hyperglycemia and its associated complications in long run.<sup>[7]</sup> Among many serious health

conditions linked to modern lifestyles, Type 2 Diabetes Mellitus (T2DM) stands out as a major global health challenge, often referred to as a “silent killer.” This chronic disease, largely driven by high calorie diet and sedentary lifestyle, has become one of humanity’s most formidable adversaries. The rising prevalence of diabetes and its numerous complications including cardiovascular disease, kidney failure, nerve damage, and vision loss not only affect individual well-being rather place a significant burden on public health systems across the world.<sup>[3]</sup> As explained in *Ayurveda*, *Madhumeha* is described as a *Mahagada*<sup>[8]</sup> or *Maharoga*<sup>[9]</sup> (difficult to treat), indicating it to be a disease of grave clinical significance. It is considered a *Tridoshaj* condition, with a predominance of *Kapha dosha*, and involves vitiation of several *Dushyas*(Tissues) including *Meda* (Adipose Tissue), *Mamsa* (muscle), *Kleda* (body fluids), *Shukra* (reproductive tissue), *Shonita* (blood), *Vasa* (muscle fat), *Majja* (bone marrow), *Lasika* (lymph), *Rasa* (plasma), and *Oja* (immunity)all of which are *Kapha*-dominant elements.<sup>[10]</sup> Except for *Asthi Dhatu* (bone tissue), nearly all *Dhatu*s are affected through both *Avarana* (obstruction) and *Dhatu Kshaya* (tissue depletion)

mechanisms of *Vata Dosha*.<sup>[11]</sup> The *Purvarupa*(prodromal) features of *Prameha*(Diabetes) include symptoms like excessive coating on teeth, palate, and tongue, *Karapada Dahaburning* sensation in hands and feet,excessive oiliness of body, increased thirst, sweet taste in mouth, *Bahasi*(excessive sweating), and *Shrama* (fatigue).The cardinal symptoms of *Prameha* are *Prabhoota Mutrata* (frequent urination) and *Avila Mutrata* (turbid urine).<sup>[11]</sup> Many Blood Glucose regulating herbo-mineral formulations such as *Triphala* (*Embllica officinalis*, *Terminalia bellerrica*, *Terminalia chebula*), *Shilajit* (Black Bitumen), *Ashwagandha* (*Withania somnifera*), *Guduchi* (*Tinospora cordifolia*), *Neem* (*Azadirachta indica*) and *Karela* (*Momordica charantia*) can be relatively effective and safe.<sup>[12-15]</sup> Besides drugs,*Ayurveda* also recommends *Pathya-Apathya* (compatible and incompatible diet and lifestyle) in the management of diseases. Based upon similarities in signs and symptoms, Type2DM can be compared with *Madhumeha* from *Ayurveda*. In *Ayurvedic* texts, *Madhumeha* (*Vata Predominant*) is classified under the *Prameha* (*Kapha Predominant*).

#### **Samprapti Ghatak(Components of Pathogenesis)<sup>[16]</sup>**

**Table 1: Samprapti Ghatak(Components of Pathogenesis)**

<b>Dosha(Bodily Humors or three Energies of Body)</b>	<b>Kapha Predominant Tridosha</b>
<i>Dushya</i> (Targeted Body Tissues)	<i>Meda, Mamsa, Kleda, Shukra, Rakta, Vasa, Majja, Lasika, Ras, Ojas</i>
<i>Srotas</i> ( Body Channels)	<i>Mutravah Srotas, Medovah Srotas</i> (Urine, Adipose tissue channels)
<i>Srotodushti</i> (Affliction of Body Channels)	<i>Sanga</i> (Obstruction) and <i>Atipravriti</i> (Excessive Secretion)
<i>Agni</i> (Digestion and Metabolic Strength)	<i>Jatharagni, Medodhatu Agni</i> (digestive fire, adipose tissue metabolism)
<i>Udbhavasthan</i> (Site of Origin of Disease)	<i>Amashaya</i> (Stomach)
<i>Adhishtan</i> (Site of Manifestation)	<i>Basti</i> (Urinary Bladder)
<i>Rogmarg</i> (Route of Pathogenesis)	<i>Bahya Rogmarg</i> (Impaired Tissue Metabolism)
<i>Swabhava</i> (Stage of Disease Manifestation)	<i>Chirakari</i> <sup>[17]</sup> (Chronic disease)
<i>Sadhya Asadhyata</i> (Prognosis)	<i>Yapya</i> (Palliable)

#### **CASE STUDY**

A 38-year-old Male, known case of Diabetes mellitus type 2, on Metformin since 8 months reported to Jeena Sikho lifecare limited Hospital, Agra, Uttar Pradesh India on 19<sup>th</sup> December 2024. He presented with symptoms such as *Vibandh* (Constipation), *Bahumutrata* (Polyuria), *Atibhojana* (Polyphagia), *Atipipasa* (Polydipsia) and *Tanava* (Stress). *Samprapti Ghatak* mentioned in **Table 1**, Examination mentioned in **Table 2**. Medicines advised in all the visits with dosage and *Anupaana* (Vehicle) are mentioned in Table 3, Medicines Ingredients and Therapeutic effects are mentioned in **Table 4**. Fasting blood sugar (FBS) and Postprandial blood sugar (PPBS) monitored at home with personal glucometer December 15, 2024 – February 17, 2025 mentioned in **Table 5**. HbA<sub>1c</sub> Reports comparison of Before and After *Ayurvedic* Treatment mentioned in **Table 6**. Symptoms Before and After Treatment mentioned in **Table 7**. *Samprapti Chakra* mentioned in **Figure 1**.

Table 2: Examination.

<b>Personal history</b>
Diet- Vegetarian
Appetite- Abnormal (Polydipsia)
Bowel- Constipation
MicturitionFrequency - 8 to 10 times/day
Sleep-Reduced
<b>General Physical examination</b>
Pulse rate-80/min
Blood Pressure -130/82 mmHg
Weight- 76.2 Kg
Height- 5'7"
BMI – 27.1 kg/m <sup>2</sup>
Respiratory rate-18/min
Temperature-98 <sup>0</sup> F
<b>Ashta vidh pareeksha(Eight - fold Examination)</b>
Nadi(Pulse)- Pitta Vattaj
Mala(Stool)- Vibandh(Constipation)
Mutra(Urine)- Bahumutrata
Jihwa(Tongue)- Saam(coated)
Shabda(Voice)- Spashta(clear)
Sparsha(Touch)- Anushna Sheet(Normal)
Drik(Eyes)-Avikrit(Normal)
Akriti(Physique)- Sthool (Obese)
<b>Systemic examination</b>
Cardio Vascular System -S1,S2 Normal, no murmur
Central Nervous System -Conscious, Oriented
Respiratory System – Air Entry Bilaterally Normal
Per Abdomen -Soft, non-tender, no Organomegaly

**Investigations**

19/12/2024

HbA1c 8.9% (with Tablet Metformin 500 mg OD since April 2024).

**TREATMENT PLAN**

**1. Disciplined & Intelligent Person's Diet (DIP)<sup>[18]</sup> & Ayurvedic Dietary Guidelines from Jeena Sikho Lifecare Limited Hospital.**

- Avoid wheat, refined foods, dairy, coffee, tea and packaged foods.
- Do not eat after 8 PM.
- While Consuming solid foods, take small bites and chew each bite 32 times.

**Hydration**

- Sip water slowly.

Aim to drink 1 liter of alkaline water daily(Procedure as follow):

1. **Setup the Glass Jug:** Fill a clean jug with fresh drinking water.
2. **Add Copper Vessel:** Place a copper vessel or glass inside the jug.
3. **Infuse Flavors:** Add slices of carrot, cucumber, and lemon to the water.
4. **Add Herbs:** Include ginger slices, mint leaves, and coriander leaves.
5. **Optional Spice:** Add a slice of green chili for added flavor.

6. **Let it Sit:** Allow the mixture to sit for 12 hours.

7. **Add Amla**(*Embllica officinalis*)and Basil(*Ocimum tenuiflorum*): After 6 hours, add 3–4 pieces of Amla and a handful of Basil leaves. Let it infuse for 6 hours.

8. **Ready to Drink:**3 to 4 times a day in divided portions.

**Living water**(The approach involves a three-tiered filtration system using clay pots, each serving a specific purpose to purify and energize the water.

1. **Top Pot:** Fill this pot with a mixture of small and large river stones, followed by charcoal made from burning wood. This layer acts as an initial filter, removing larger impurities.
2. **Middle Pot:** Place a similar mix of stones here. Additionally, add *Moringa* seed powder (also known as drumstick or "*Sahjan*" powder), a silver vessel, a copper vessel, and *Rudraksha* (*Elaeocarpus angustifolium*). *Moringa* seeds are known for their natural water-purifying properties, while silver and copper are believed to enhance the quality of water.
3. **Bottom Pot:** This pot remains unaltered and serves as the collection chamber for the purified water.
4. Advised to drink as per the need.

**Millet Consumption<sup>[19]</sup>**

- Include five types of millet in diet: Foxtail, Barnyard, Little, Kodo, and Browntop millet.

- Cook the millets in mustard oil using stainless steel cookware.

### Meal Timings and Structure

- Early Morning (5:45 AM): Herbal tea (200 ml) along with raw ginger (10gm) and turmeric (10gm).
- Breakfast (8:30-9:30 AM): Fruits according to season and low glycemic index (in grams, equal to patient's weight  $\times$  10) and a fermented millet shake.
- Morning Snacks (11:00-11:20 AM): 100 gm of sprouts and 150 ml of red juice (Carrot and beetroot juice) and 4-5 soaked almonds.
- Lunch (12:30 PM - 2:00 PM): Two plates—Plate 1: steamed salad (in grams, equal to patient's weight  $\times$  5); Plate 2: cooked millet-based dish.
- Evening Snacks: Green juice composed of *Neem* (*Azadirachta indica*), *Tulsi* (*Ocimum tenuiflorum*), *Paan* (*Piper betle*), *Karela* (*Momordica charantia*), *Jamun* (*Syzygium cumini*), *Sadabahar* (*Vinca rosea*) taken in quantities of 10 gm each, 200 ml water added, ground in a mixer grinder, filtered, and consumed in a quantity of (100-150 ml) along with 4-5 almonds.
- Dinner (6:15-7:30 PM): Plate 1: raw salad, chutney, (in grams, equal to patient's weight  $\times$  5), and *Mugda Yusha* (Broth made by boiling *Moong Dal*); Plate 2: millet *Khichdi*/ fermented millets/ millet chapatti etc.

### Fasting

- It was recommended to fast for one day per week.

### Special Instructions

- Offer gratitude to the divine before consuming anything.
- Practice *Vajrasana* (Sitting Yoga Pose) after every meal.
- Take a slow 10-minute walk after each meal.

### Diet Types

- The diet includes low salt solid, semi-solid and smoothie options.
- The Suggested foods include herbal tea, red juice, green juice, a variety of steamed fruits, fermented millet shakes, soaked almonds and steamed salads.

### 2. Lifestyle Recommendations

1. Wake up early in morning<sup>[20]</sup>
2. Include meditation as a method for relieving stress.<sup>[21]</sup>
3. Practice Yoga (*Sukhasana* and *Sukshma Pranayama*) in morning.
4. Go for a brisk 30-minute barefoot walk early morning.
5. Aim for 6-8 hours of restful sleep each night.
6. ***Neem Kerala therapy***: Put both the feet inside a bucket which consist of *Neem* and *Karela* paste inside and knead them by moving both the feet till bitter taste appears on the tongue.

Follow a structured daily routine to maintain balance and organization in life.

### 3. Medication

**Table 3: Medicines on all the visits with dosage and *Anupaan* (Vehicle).**

19 <sup>th</sup> December 2024	04 <sup>th</sup> February 2025	06 <sup>th</sup> March 2025
<b>DM Capsule</b> 1 Capsule B.D <i>Adhobhakta</i> (After Meal) with <i>Koshna Jala</i> (Lukewarm Water)	<b>DM Capsule</b> 2 Capsule B.D <i>Adhobhakta</i> with <i>Koshna Jala</i>	<b>Prameh Har Powder</b> 1 tsf O.D <i>Adhobhakta</i> with <i>Koshna Jala</i>
<b>Lipi Capsule</b> 1 Capsule B.D <i>Adhobhakta</i> with <i>Koshna Jala</i>	<b>Lipi Capsule</b> 1 Capsule B.D <i>Adhobhakta</i> with <i>Koshna Jala</i>	<b>Madhumeh Nashak Syrup</b> 20 ml B.D <i>Adhobhakta</i> with <i>Sama Matra Koshna Jala</i>
<b>JS - DIAB Capsule</b> 1 Capsule B.D <i>Adhobhakta</i> with <i>Koshna Jala</i>	<b>Madhumeh Nashak Syrup</b> 20 ml B.D <i>Adhobhakta</i> with <i>sam matra koshna jala</i>	<b>DM Capsule</b> 2 Capsule B.D <i>Adhobhakta</i> with <i>Koshna Jala</i>
<b>Chander Vati</b> 2 B.D <i>Adhobhakta</i> with <i>Koshna Jala</i>	<b>DR Madhumeha Tablet</b> 2 Tablets B.D <i>Adhobhakta</i> with <i>Koshna Jala</i>	<b>DR Shuddhi Powder</b> ½ tsf HS / <i>Nishikal</i> with <i>Koshna Jala</i>
<b>Relivon powder</b> ½ tsf HS <i>Nishikal</i> with <i>Koshna Jala</i>	<b>Prameh Har Powder</b> 1 tsf O.D <i>Adhobhakta</i> with <i>Koshna Jala</i>	
<b>DM Syrup</b> 20 ml B.D <i>Adhobhakta</i> with <i>Sama Matra Koshna Jala</i> (equal amount of lukewarm water)		



Table 4: Medicines Ingredients and Therapeutic effects.

Medicines	Ingredients	Established Therapeutic Effects
DM Capsule	<b>Jambu</b> ( <i>Syzygium cumini</i> ), <b>Guduchi</b> ( <i>Tinospora cordifolia</i> ), <b>Methika</b> ( <i>Trigonella fenugreekum</i> ), <b>Shwet moosli</b> ( <i>Chlorophytum borivilianum</i> ), <b>Neem</b> ( <i>Azadirachta indica</i> ), <b>Karvellak</b> ( <i>Momordica charantia</i> ), <b>Aamragandhi Haridra</b> ( <i>Curcuma amada</i> ), <b>Bilva patra</b> ( <i>Aegle marmelos</i> leaves), <b>Gudmar</b> ( <i>Gymnema sylvestre</i> ), <b>Shilajit</b> ( <i>Asphaltum</i> )	Rakta Sharkara Niyantran (reduce blood glucose levels)
Lipi Capsule	<b>Arjun</b> ( <i>Terminalia arjuna</i> ), <b>Guggul</b> ( <i>Commiphora wightii</i> ), <b>Resine Ext.</b> (Resin Extract – source-specific), <b>Haridra</b> ( <i>Curcuma longa</i> ), <b>Bhumiamla</b> ( <i>Phyllanthus niruri</i> ), <b>Guduchi</b> ( <i>Tinospora cordifolia</i> ), <b>Amla</b> ( <i>Emblica officinalis</i> ), <b>Haritaki</b> ( <i>Terminalia chebula</i> ), <b>Vibhitaki</b> ( <i>Terminalia bellirica</i> ), <b>Sunthi</b> ( <i>Zingiber officinale</i> ), <b>Kali Mirch</b> ( <i>Piper nigrum</i> ), <b>Pippali</b> ( <i>Piper longum</i> ), <b>Mulethi</b> ( <i>Glycyrrhiza glabra</i> ), <b>Punarnava</b> ( <i>Boerhavia diffusa</i> ), <b>Jatamansi</b> ( <i>Nardostachys jatamansi</i> ), <b>Lahsun</b> ( <i>Allium sativum</i> ), <b>Akik Pishti</b> (mineral of silica), <b>Mukta Pishti</b> (Pearl powder), <b>Abhrak Bhasm</b> ( <i>Creta gallica purificata</i> ), <b>Shankh Bhasm</b> ( <i>Turbinella raphe</i> )	Rakta Shodhak (detoxification of blood), Deepan (stimulate hunger), Pachan (digest previous undigested food)
Chander Vati	<b>Kapoor Kachri</b> ( <i>Hedychium spicatum</i> ), <b>Vacha</b> ( <i>Acorus calamus</i> ), <b>Mustak</b> ( <i>Cyperus rotundus</i> ), <b>Kalmegh</b> ( <i>Andrographis paniculata</i> ), <b>Giloy</b> ( <i>Tinospora cordifolia</i> ), <b>Devdaru</b> ( <i>Cedrus deodara</i> ), <b>Desi Haldi</b> ( <i>Curcuma longa</i> ), <b>Atees</b> ( <i>Aconitum heterophyllum</i> ), <b>Daru Haldi</b> ( <i>Berberis aristata</i> ), <b>Pipla Mool</b> ( <i>Piper longum</i> root), <b>Chitrak</b> ( <i>Plumbago zeylanica</i> ), <b>Dhaniya</b> ( <i>Coriandrum sativum</i> ), <b>Harad</b> ( <i>Terminalia chebula</i> ), <b>Bahera</b> ( <i>Terminalia bellirica</i> ), <b>Amla</b> ( <i>Phyllanthus emblica</i> ), <b>Chavya</b> ( <i>Piper chaba</i> ), <b>Vayavidang</b> ( <i>Embelia ribes</i> ), <b>Pippal</b> ( <i>Piper longum</i> ), <b>Kalimirch</b> ( <i>Piper nigrum</i> ), <b>Sounth</b> ( <i>Zingiber officinale</i> dried ginger), <b>Gaj Pipal</b> ( <i>Scindapsus officinalis</i> ), <b>Swarn Makshik Bhasm</b> (Chalcopyrite), <b>Sajji Khar</b> ( <i>Salsola stockii</i> ), <b>Sendha Namak</b> (salt), <b>Kala Namak</b> (Salt), <b>Chhoti Elaiachi</b> ( <i>Elettaria cardamomum</i> ), <b>Dalchini</b> ( <i>Cinnamomum verum</i> ), <b>Tejpatra</b> ( <i>Cinnamomum tamala</i> ), <b>Danti</b> ( <i>Baliospermum montanum</i> ), <b>Nishoth</b> ( <i>Operculina turpethum</i> ), <b>Banslochan</b> ( <i>Bambusa arundinacea</i> ), <b>Louh Bhasma</b> , <b>Shilajit</b> ( <i>Asphaltum punjabinum</i> ), <b>Guggul</b> ( <i>Commiphora wightii</i> ).	MutraDaha Nashak (Reduces Burning Micturition), Deepan, Pachan, Mutra Sharkara Nirharana, Dhatu Poshak (Strengthening every tissue)
Madhumeha Tablet	<b>Gudmar</b> ( <i>Gymnema sylvestre</i> ), <b>Methi</b> ( <i>Trigonella foenum-graecum</i> ), <b>Giloy</b> ( <i>Tinospora cordifolia</i> ), <b>Neem</b> ( <i>Azadirachta indica</i> ), <b>Haritaki</b> ( <i>Terminalia chebula</i> ), <b>Karela</b> ( <i>Momordica charantia</i> ), <b>Chiraita</b> ( <i>Swertia chirayita</i> ), <b>Jamun</b> ( <i>Syzygium cumini</i> ), <b>Vijaysar</b> ( <i>Pterocarpus marsupium</i> ), <b>Daruhaldi</b> ( <i>Berberis aristata</i> ), <b>Karanj</b> ( <i>Pongamia pinnata</i> )	Rakta Sharkara Niyantran
Relivon powder	<b>Sawarna Patri</b> ( <i>Luffa aegyptiaca</i> ), <b>Mishreya</b> (sugar), <b>Sendha Namak</b> (Rock Salt), <b>Sounth</b> ( <i>Zingiber officinale</i> ), <b>Jang Harad</b> ( <i>Chebulic Myrobalan</i> ) and <b>Erand Oil</b> ( <i>Ricinus communis</i> )	Nitya Virechan (regular purgation)
DM Syrup	<b>Kumari</b> ( <i>Aloe vera</i> ), <b>Papita</b> ( <i>Carica papaya</i> ), <b>Giloy</b> ( <i>Tinospora cordifolia</i> ), <b>Saptrangi</b> ( <i>Salcia chinensis</i> ), <b>Karela</b> ( <i>Momordia charantia</i> )	Rakta Sharkara Niyantran
Prameh Har Powder	<b>Kutaki</b> ( <i>Picrorhiza kurroa</i> ), <b>Chiraita</b> ( <i>Swertia chirata</i> ), <b>Neem</b> ( <i>Azadirachta indica</i> ), <b>Karela</b> ( <i>Momordica charantia</i> ), <b>Rasonth</b> ( <i>Berberis aristata</i> ), <b>Imli Beej</b> ( <i>Tamarindus indica</i> ), <b>Kala Namak</b> , <b>Giloy</b> ( <i>Tinospora cordifolia</i> ), <b>Sonth</b> ( <i>Zingiber officinale</i> ), <b>Babool Chaal</b> ( <i>Vachellia nilotica</i> ), <b>Sarpgandha</b> ( <i>Rauvolfia serpentina</i> ), <b>Trivang Bhasm</b> (Stannum, Plumbum, Zincum), <b>Yashad Bhasm</b> (Zincum, Hydrargyrum, Sulphur) <b>Revend Chinni</b> ( <i>Rheum emodi</i> ), <b>Shodhit Guggul</b> ( <i>Commiphora mukul</i> ), <b>Methika</b> ( <i>Trigonella fenugreekum</i> ), <b>Jamun</b> ( <i>Syzygium cumini</i> ), <b>Babool Fruit</b> ( <i>Adansonia digitata</i> ), <b>Karanj</b> ( <i>Milletia pinnata</i> ), <b>Shilajit</b> , <b>Haldi</b> ( <i>Curcuma longa</i> ), <b>Harad</b> ( <i>Terminalia chebula</i> ), <b>Inderjaun</b> ( <i>Holarrhena antidysenterica</i> ), <b>Vanshlochan</b> ( <i>Bambusa arundinacea</i> ), <b>Bahera</b> ( <i>Terminalia bellirica</i> ), <b>Amla</b> ( <i>Emblica officinalis</i> ), <b>White Musli</b> ( <i>Chlorophytum borivilianum</i> ), <b>Gurmar</b> ( <i>Gymnema sylvestre</i> )	Rakta Sharkara Niyantran
DR Shuddhi Powder	<b>Trikatu</b> ( <i>Piper longum</i> , <i>Piper nigrum</i> , <i>Zingiber officinale</i> ), <b>Triphala</b> ( <i>Emblica officinalis</i> , <i>Terminalia bellirica</i> , <i>Terminalia chebula</i> ), <b>Nagarmotha</b> ( <i>Cyperus rotundus</i> ), <b>Vay Vidang</b> ( <i>Embelia ribes</i> ), <b>Chhoti Elaiachi</b> ( <i>Elettaria cardamomum</i> ), <b>TejPatta</b> ( <i>Cinnamomum tamala</i> ), <b>Laung</b> ( <i>Syzygium aromaticum</i> ), <b>Nisoth</b> ( <i>Operculina turpethum</i> ),	Deepan, Pachan, Nitya Virechan

	<i>NamakSendha</i> (Rock salt), <i>Dhaniya</i> ( <i>Coriandrum sativum</i> ), <i>PiplaMool</i> ( <i>Piper longum</i> root), <i>Jeera</i> ( <i>Cuminum cyminum</i> ), <i>Nagkesar</i> ( <i>Mesua ferrea</i> ), <i>Amarvati</i> ( <i>Achyranthes aspera</i> ), <i>Anardana</i> ( <i>Punica granatum</i> ), <i>BadiElaichi</i> ( <i>Amomum subulatum</i> ), <i>Hing</i> ( <i>Ferula assafoetida/ narthax</i> ), <i>Kachnar</i> ( <i>Bauhinia variegata</i> ), <i>Ajmod</i> ( <i>Trachyspermum ammi</i> ), <i>Sazzikhar</i> ( <i>Salsola stocksii</i> ), <i>Pushkarmool</i> ( <i>Inula racemosa</i> ), <i>Mishri</i> ( <i>Saccharum officinarum</i> ).	
JS – DIAB Capsule	<i>Karvellak</i> ( <i>Momordica charantia</i> ), <i>Gurmar</i> ( <i>Gymnema sylvestri</i> ), <i>Paneer dodi</i> ( <i>Withania coagulens</i> ), <i>Jambu</i> ( <i>Syzygiumcumini</i> ), <i>Methika</i> ( <i>Trigonella foenum-graceum</i> ), <i>Neem</i> ( <i>Azadirachta indica</i> ), <i>Kalmegh</i> ( <i>Andrographis paniculata</i> ), <i>Bilva</i> ( <i>Aegle marmelos</i> ), <i>Mamajjak</i> ( <i>Encicostema littorale</i> ), <i>Guduchi</i> ( <i>Tinospora cordifolia</i> ), <i>Yashad bhasm</i> (Zinc), <i>Vang bhasm</i> (Tin), <i>Talcum Powder</i> ( <i>Hydrous mangnesium silicate</i> ), <i>Magnesium Stearate</i> ( <i>Magnesium octadecanote</i> ), <i>Colloidal Silicon dioxide</i> ( <i>Silica</i> ), <i>Bhang Bhasma</i> ( <i>Cannabis</i> ), <i>Jarul</i> ( <i>Lagerstroemia flosreginate</i> )	Rakta Sharkara Niyantran

## RESULTS

Blood GlucoseMonitoring Chart.

Table 5: Period: Fasting blood sugar (FBS) and Postprandial blood sugar (PPBS) December 15, 2024 – February 17, 2025 Ayurvedic treatment started on20<sup>th</sup> December 2024.

Blood Glucose levels before starting Ayurvedic treatment		
DATES	FBS (mg/dl)	PPBS 2hr after Breakfast (mg/dl)
15 <sup>th</sup> December 2024	-	206
16 <sup>th</sup> December 2024	151	250
17 <sup>th</sup> December 2024	-	218
18 <sup>th</sup> December 2024	148	-
19 <sup>th</sup> December 2024	164	222
Blood Glucose levels after starting Ayurvedic treatment		
DATES	FBS (mg/dl)	PPBS 2hr after Breakfast (mg/dl)
20 <sup>th</sup> December 2024	142	180
21 <sup>st</sup> December 2024	-	189
22 <sup>nd</sup> December 2024	132	177
23 <sup>rd</sup> December 2024	142	-
24 <sup>th</sup> December 2024	137	172
25 <sup>th</sup> December 2024	-	-
26 <sup>th</sup> December 2024	-	166
27 <sup>th</sup> December 2024	126	175
28 <sup>th</sup> December 2024	-	-
29 <sup>th</sup> December 2024	-	169
30 <sup>th</sup> December 2024	136	154
31 <sup>st</sup> December 2024	140	-
1 <sup>st</sup> January 2025	133	160
2 <sup>nd</sup> January 2025	-	159
3 <sup>rd</sup> January 2025	-	152
4 <sup>th</sup> January 2025	139	-
5 <sup>th</sup> January 2025	-	-
6 <sup>th</sup> January 2025	117	100
7 <sup>th</sup> January 2025	103	-
8 <sup>th</sup> January 2025	-	149
9 <sup>th</sup> January 2025	99	131
10 <sup>th</sup> January 2025	-	114
11 <sup>th</sup> January 2025	92	119
12 <sup>th</sup> January 2025	96	-
13 <sup>th</sup> January 2025	104	117

14 <sup>th</sup> January 2025	100	-
15 <sup>th</sup> January 2025	98	144
16 <sup>th</sup> January 2025	-	131
17 <sup>th</sup> January 2025	87	-
18 <sup>th</sup> January 2025	-	123
19 <sup>th</sup> January 2025	81	-
20 <sup>th</sup> January 2025	88	125
21 <sup>st</sup> January 2025	-	-
22 <sup>nd</sup> January 2025	89	147
23 <sup>rd</sup> January 2025	84	-
24 <sup>th</sup> January 2025	81	148
25 <sup>th</sup> January 2025	-	143
26 <sup>th</sup> January 2025	89	-
27 <sup>th</sup> January 2025	86	121
28 <sup>th</sup> January 2025	92	140
29 <sup>th</sup> January 2025	77	-
30 <sup>th</sup> January 2025	-	141
31 <sup>st</sup> January 2025	82	136
1 <sup>st</sup> February 2025	-	154
2 <sup>nd</sup> February 2025	-	-
3 <sup>rd</sup> February 2025	81	149
4 <sup>th</sup> February 2025	84	-
5 <sup>th</sup> February 2025	-	-
6 <sup>th</sup> February 2025	88	121
7 <sup>th</sup> February 2025	80	-
8 <sup>th</sup> February 2025	-	132
9 <sup>th</sup> February 2025	-	147
10 <sup>th</sup> February 2025	-	-
11 <sup>th</sup> February 2025	81	-
12 <sup>th</sup> February 2025	-	123
13 <sup>th</sup> February 2025	89	-
14 <sup>th</sup> February 2025	-	141
15 <sup>th</sup> February 2025	77	-
16 <sup>th</sup> February 2025	89	136
17 <sup>th</sup> February 2025	80	140

Table 6: HbA<sub>1c</sub> Reports Before and After Treatment.

Lab Test	Before Treatment 19 <sup>th</sup> December 2024	After Treatment 17 <sup>th</sup> February 2025
HbA <sub>1c</sub>	8.9%	5.2%

Table 7: Symptoms Before and After Treatment.

Complaints	Before Treatment	After Treatment
<i>Vibandh</i> (Constipation)	4/10	0/10
<i>Bahumutrata</i> (Polyuria)	8 to 10 times a day with Nocturia	4 to 5 times a day with minimal Nocturia
<i>Atibhojana</i> (Polyphagia)	Excessive hunger	Content with prescribed <i>Ayurvedic</i> diet plan
<i>Atipipasa</i> (Polydipsia)	Excessive thirsty	
<i>Tanava</i> (Stress)	6/10	1/10

By the end of the treatment period, subsequent follow-up assessments demonstrated a significant reduction in HbA<sub>1c</sub> levels to 5.2 % Reduction in fasting and Post prandial blood sugar levels as per record maintained by the patient with his personal glucometer. The patient reported a marked alleviation of symptoms as *Vibandh* (Constipation), *Bahumutrata* (Polyuria), *Atibhojana* (Polyphagia), *Atipipasa* (Polydipsia), and *Tanava* (Stress). The patient discontinued Tablet Metformin 500 mg as soon as he started with *Ayurvedic* treatment.

## DISCUSSION

### Discussion on Etiologic Classification of *Prameha* -

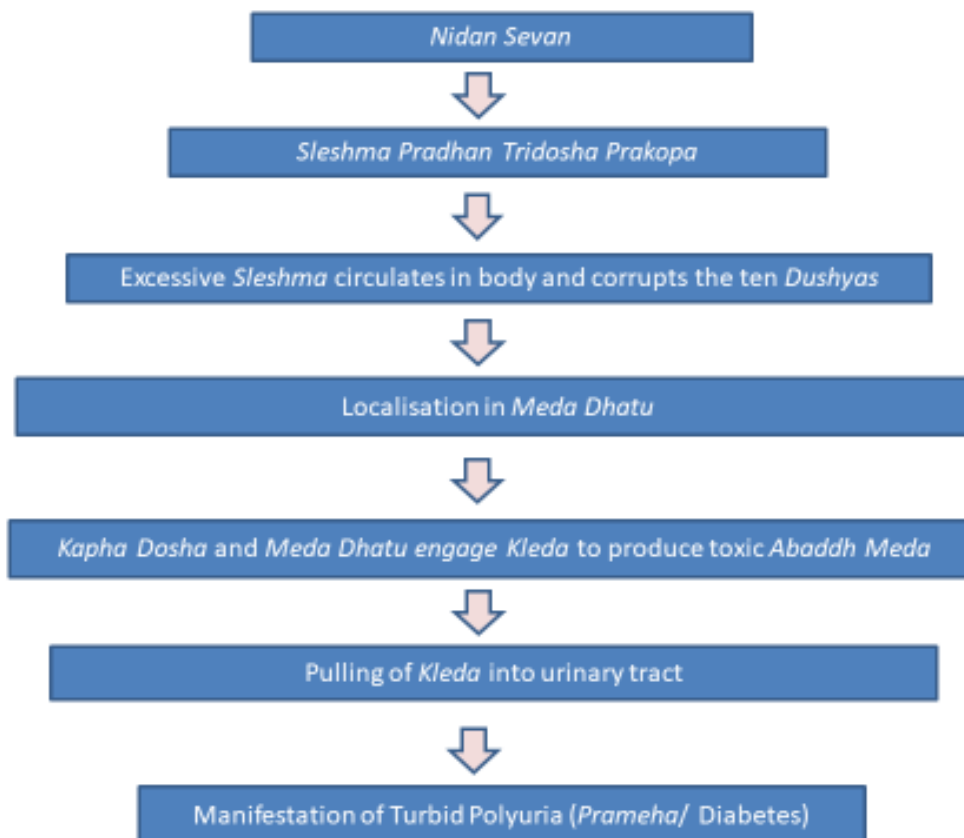
1. *Sahaja* (Hereditary) – This is stated to be incurable; the patient is underweight all one's life, weak, and has a short lifespan. Believed to be innate, no treatment helps. *Sahaja Prameha* occurs as a result of genetic origin. While describing prognosis, *Acharya Charaka* also stated *Prameha* occurring due to *Beeja Dosha* being incurable. This can best to

linked to T1DM. The T1DM patients were incurable before the discovery of Insulin in 1921.

2. *Apathyanimittaja* (Acquired) -The features of this type of *Prameha* match with T2DM, and all the managements mentioned in the *Ayurvedic* texts are for this variety only. *Apathyanimittaja Prameha* is a result of improper diet and / or lifestyle, including stress.
3. The consumption of curd, meat and juices, as well as milk and dairy products are all considered causative

factors. These foods are regarded as *Kapha*-increasing, and since *Prameha* is predominantly a *Kapha* disorder in *Ayurveda*, their regular intake can aggravate the condition. Moreover, freshly harvested or newly cooked rice, sweet drinks, and preparations made from jaggery are also included in the list of causative agents. The verse concludes by emphasizing that anything that increases *Kapha* in the body may contribute to the onset/ worsening of *Prameha*.

## DISCUSSION ON SAMPRAPTI



Excessive, and unhealthy *Kapha* being produced by the aforementioned *Nidan* / Etiologic factors undergoes the six stages of *Shadvidha Kriya Kala* as mentioned by *Sushruta*. Lethargy (the stage of *Sanchaya* / *Dosha* accumulation), weight gain (the stage of *Prakopa* / *Dosha* agitation), polyphagia (the stage of *Prasar* / spread of *Dosha*), nocturia (the stage of *Sthanasamshraya* / localisation of *Dosha*), polyuria (the stage of *Vyaktavastha* / Manifestation of Disease), and infectious dermatoses (the stage of *Bheda* / complications), represent one stage each respectively. This mechanism is solely due to increase in the quantities, and reduced qualities of *Kapha*, especially in the *Meda Dhatu* / adipose tissue (*Abaddh Meda*). These excess *Kapha* and *Meda* get combined with *Mamsa* which results in *Mamsapidika*. This eventually involves the remaining *Kapha* predominant *Dhatu*s, and fluids, and these vitiated *Dosh*es settle in *Mutravaha Strotas* (Urine producing channels) which results in *Prameha*. In case of poor management, all the 19 types of

*Prameha* (Diabetes) deteriorate to the 20th type - *Madhumeha* (T2DM), posing a grave outcome. This is noteworthy that the *Dosha* imbalance initiates at digestive tract, circulates, and eventually settles in the urine forming channels. Urine formation, as per *Ayurveda*<sup>[22]</sup>, begins at digestive tract, eventually passing through kidneys, ureter, bladder, and urethra. Thus, the *Samprapti* can best be countered at Digestive tract.

## Discussion on Purvarupa / Prodromal symptomatology

Many of the *Purvarupa* signs, and symptoms mentioned by most of the Sages, as *Charak*, *Sushrut*, *Vagbhat* etc are enumerated in the list of complications by the western medicine. Some of the features as *Chikkanata Dehe* (unctuous body parts), *Ghanangata* (Excessive, unhealthy nourishment), *Jatilibhuteshu kesheshu* (excessive entanglement of hairs), *Keshnakhativridhi* (Excessively growing hairs, & nails), *Maadhuryam aasyam* (Sweetness in mouth), *Mukh-talu-kanth*



*shosham* (Dryness in mouth, palate and throat), *Pipasa* (Thirst), *Mut্রে Cha Mutradoshanam* Madhur Shukla *Mutrata* (Turbid, Sweet and whitish urine) represent accumulation of Advanced Glycation. Endproducts (AGEs), *Kara-Padayo Suptata Daho Suptata Cha Angeshu* (Burning sensation and numbness in various body parts) represents Diabetic Neuropathy due to altered protein, and polyol pathway leading to oxidative stress and damage to nerve cells. This is interesting to see that the western Medicine groups most of the Prodromes as complications; *Ayurveda* being an observational health science, many of these symptoms were believed to be prodromal, however, nowadays, Western medicine established them as long term complications.

#### Discussion on Rupa / clinical picture

*Prabhoota Mutrata* (Polyuria), and *Avil Mutrata* (Turbid micturition) are the two symptoms of *Prameha* (Diabetes). This is a different perspective when compared to the Western medicine, as most other signs, and symptoms are enumerated under the *Purvarupa* (Prodromes), and / or *Bheda* (Complications). *Avil Mutrata* represents loss of precious *Dhatus* from human body to urine causing most of the signs and symptoms of *Prameha*. *Avil Mutrata* can be likened to increase specific gravity of urine in the patients with T2DM.

#### Discussion on Aahar

This diet emphasizes foods that are low in glycemic index, high in fiber, and support metabolic balance, helping to control blood glucose levels effectively. By eliminating wheat, refined carbohydrates, dairy, and processed foods, it reduces insulin resistance and minimizes the risk of sugar spikes.

Millets — such as Browntop, Foxtail, Barnyard, Kodo, and Little millet — are a central part of the diet. These are rich in fiber and nutrients and are digested slowly, promoting sustained energy release and better blood glucose control. Fermented millet products improve gut health, which plays a key role in metabolic regulation.<sup>[23]</sup>

The inclusion of herbal tea, green juice (which consists of *Neem*, *Karela*, and *Jamun*), and red juice (which consists of carrot and beetroot) further helps detoxify the body, stimulate the pancreas, and enhance insulinsensitivity. Alkaline and energized water prepared with copper, *Moringa* seeds, and other natural purifiers supports hydration, reduces inflammation, and improves digestion — all crucial in diabetes care.

Timing and structure of meals are designed to align with the body's natural circadian rhythm, preventing late-night eating, which is known to disturb blood glucose control. Chewing food thoroughly and eating mindfully improve digestion and prevent overeating. Light dinners and weekly fasting allow the digestive system to rest and reset, which helps regulate blood glucose and body weight.

Incorporating physical practices like *Vajrasana* after meals and short walks aid in digestion and glucose metabolism. Overall, this *Ayurvedic* diet is not just about food choices but a lifestyle approach that improves digestion, detoxifies the body, balances *Doshas* (especially *Kapha* and *Meda*), and promotes long-term control and reversal of diabetes symptoms.

#### Discussion on Vihar

Waking up early during *Brahma Muharta* supports hormonal balance and enhances metabolic function, while practices like meditation and pranayama reduce stress, a known contributor to elevated blood glucose levels. Incorporating daily yoga and regular physical activity—especially a 30-minute barefoot morning walk and walking after meals improves insulin sensitivity, digestion, and glucose metabolism. Ensuring 6–8 hours of quality sleep each night helps regulate hormones like insulin and cortisol, reducing sugar cravings and fatigue. Unique therapies like *Neem-Karela* foot detox are believed to stimulate internal organ function through reflex pathways, aiding in detoxification and metabolic balance. A disciplined daily routine (*Dinacharya*) maintains consistency in eating, sleeping, and movement, which is vital for controlling blood glucose fluctuations. Together, these lifestyle practices work synergistically with the *Ayurvedic* diet to address the root causes of diabetes, offering a natural, preventive, and restorative solution for long-term management and possible reversal of the condition.

#### Discussion on Aushadi

*Ayurvedic* Medicines prescribed: The Prescription herbs owing to their Anti *Vata*, Anti *Kapha* *Meda* purifying, tissue nourishing, anti oxidant, anti stress, anti constipation, and blood glucose regulating properties could ensure a promising outcome in this case study. The main evidence based properties of the medicines used are as follows -*Neem* (*Azadirachta indica*) -*Rasa* (Taste): *Tikta* (Bitter), *Kashaya* (Astringent), *Guna* (Qualities): *Laghu* (Light), *Veerya* (Potency): *Sheeta* (Cooling), *Vipaka* (Post-digestive effect): *Katu* (Pungent), *Prabhava* (Specific action): *Krimighna* (anti-parasitic), *Raktashodhaka* (blood purifier). *Karela* (Bitter Gourd) - *Momordica charantia*, *Rasa*: *Tikta* (Bitter), *Kashaya*, *Guna* *Laghu* (Light), *Ruksha* (Dry), *Tikshna* (Sharp), *Veerya* : *Ushna* (Hot), *Vipaka*: *Katu* (Pungent), *Prabhava*: *Pramehaghna* (anti-diabetic), *Deepana* (appetizer), *Krimighna* (anti-parasitic). *Ashwagandha* - *Withania somnifera*, *Rasa*: *Kashaya* (Astringent), *Tikta* (Bitter), *Madhura* (Sweet), *Guna*: *Guru* (Heavy), *Snigdha* (Unctuous/oily), *Veerya* *Ushna* (Hot), *Vipaka*: *Madhura* (Sweet), *Prabhava*: *Balya* (Strength-promoting), *Rasayana* (Rejuvenative), *Vajikara* (Aphrodisiac). *Shilajit* - *Asphaltum punjabianum*, *Rasa* (Taste): *Tikta* (Bitter), *Katu* (Pungent), *Guna* (Qualities): *Laghu* (Light), *Ruksha* (Dry), *Tikshna* (Sharp), *Veerya*: *Ushna* (Hot), *Vipaka* (Post-digestive effect): *Katu* (Pungent), *Prabhava* (Specific action): *Yogavahi* (Catalyst),

*Rasayana* (Rejuvenator), *Vrishya* (Aphrodisiac), *Tridoshaghna* (Balances all three doshas). **Giloy** – *Tinospora cordifolia* Rasa: *Tikta* (Bitter), *Kashaya* (Astringent), *Guna Laghu* (Light), *Snigdha* (Unctuous), *Veerya*: *Ushna* (Hot), *Vipaka*: *Madhura* (Sweet), *Prabhava*: *Jwaraghna* (Antipyretic), *Rasayana* (Rejuvenator), *Tridoshaghna* (Balances all three doshas), *Immunomodulator*. **Amla**: Rasa: Predominantly *Amla* (Sour), *Madhura* (Sweet), *Katu* (Pungent), *Tikta* (Bitter), *Kashaya* (Astringent): *Guna Laghu* (Light), *Ruksha* (Dry), *Sheeta* (Cool). *Veerya*: *Sheeta* (Cooling). *Vipaka*: *Madhura* (Sweet). *Prabhava*: *Rasayana* (Rejuvenator) – promotes longevity, enhances immunity, and supports overall wellness, *Chakshushya* – improves eye health, *Tridoshaghna* – balances *Vata*, *Pitta*, and *Kapha*, and Diabetes-supportive – enhances digestion, supports pancreas function, and reduces excessive thirst and urination. **Haritaki**: Rasa: All five tastes except *Lavana* (Salty), *Kashaya* (Astringent) – predominant *Madhura* (Sweet), *Amla* (Sour), *Tikta* (Bitter), *Katu* (Pungent). *Guna Laghu* (Light), *Ruksha* (Dry), *Sara* (Flow-inducing promotes movement). *Veerya* (Potency): *Ushna* (Hot). This hot potency helps stimulate digestion and remove *Ama* (toxins), especially beneficial in *Kapha* and *Vata* disorders. *Vipaka*: *Madhura* (Sweet), *Prabhava* : *Rasayana* (Rejuvenator), *Anulomana* (Mild laxative / regulates bowel movement), *Medohara* (Reduces excess fat), *Vatanulomaka* (Pacifies *Vata*), *Shroto-shodhaka* (Cleanses body channels). **Bibhitaki**: Rasa : *Kashaya* (Astringent), *Tikta* (Bitter), *Madhura* (Sweet) *Guna*: *Ruksha* (Dry), *Laghu* (Light), *Veerya* (Potency): *Ushna* (Hot), *Vipaka*: *Madhura* (Sweet), *Prabhava* (Specific Action): *Kaphaghna* (*Kapha*-reducing), *Medohara* (Fat-reducing), *Netrahitkara* (Beneficial for eyes), *Shroto-shodhaka* (Purifies the body's channels).

### Prime Ingredients of Prescribed Drugs

1. **DM Cap**- It consists herbs mainly **Jambu** (*Syzygium cumini*)<sup>[24]</sup>, **Neem** (*Azadirachta indica*)<sup>[15]</sup> It controls blood glucose levels, improves digestion, helps in urinary problems, overall well-being, and improves energy levels
2. **Madhumeh-nashak Syrup**- It consists herbs mainly **Neem** (*Azadirachta indica*)<sup>[15]</sup> **Haritaki** (*Terminalia chebula*)<sup>[12]</sup>, **Karela** (*Momordica charantia*)<sup>[14]</sup>, **Jamun** (*Syzygium cumini*)<sup>[24]</sup> Helps against diabetes mellitus, diabetic neuropathy, and retinopathy.
3. **Chander Vati**-It is an Ayurvedic formulation consists herbs mainly **Harad** (*Terminalia chebula*), **Bahera** (*Terminalia bellirica*), **Amla** (*Phyllanthus emblica*)<sup>[12]</sup>. This formulation has diuretic and has anti-diabetic properties.
4. **Pramehrog har powder**- It consists herbs mainly **Harad** (*Terminalia chebula*), **Bahera** (*Terminalia bellirica*), **Amla** (*Phyllanthus emblica*)<sup>[12]</sup>, **Neem** (*Azadirachta indica*)<sup>[15]</sup> This is helpful in diabetes, urinary problems, strengthen

immunity, diabetic neuropathy, and diabetic retinopathy.

5. **Dr Shuddhi Powder**- It consists herbs mainly **Harad** (*Terminalia chebula*), **Bahera** (*Terminalia bellirica*), **Amla** (*Phyllanthus emblica*)<sup>[12]</sup>, **Trikatu** (*Piper longum*, *Piper nigrum*, *Zingiber officinale*)<sup>[28]</sup> This is an Ayurvedic formulation which is rich in nutrients and antioxidants, increases energy and immunity and helps in better digestion
6. **Lipi Capsule**- It consists herbs mainly **Harad** (*Terminalia chebula*), **Bahera** (*Terminalia bellirica*), **Amla** (*Phyllanthus emblica*)<sup>[12]</sup>, **Arjun** (*Terminalia arjuna*)<sup>[25]</sup> This combination is Anti-oxidant, repair injured cells, and maintains overall health of the body.
7. **DR Madhumeha Tablet** -It consists herbs mainly **Neem** (*Azadirachta indica*)<sup>[15]</sup>, **Haritaki** (*Terminalia chebula*)<sup>[12]</sup>, **Karela** (*Momordica charantia*)<sup>[14]</sup>, **Jamun** (*Syzygium cumini*)<sup>[24]</sup> It reduces blood glucose level.
8. **Relivon powder**- It consists herbs mainly **Erand Oil** (*Ricinus communis*)<sup>[27]</sup>, **Sounth** (*Zingiber officinale*)<sup>[28]</sup> This is laxative, and detoxifies the body.
9. **JS – DIAB**- It consists herbs mainly **Neem** (*Azadirachta indica*)<sup>[15]</sup>, **Jamun** (*Syzygium cumini*)<sup>[24]</sup> It increases metabolism and reduces the glycemic load of body.
10. **DM Syrup** - It consists herbs mainly **Kumari** (*Aloe vera*)<sup>[26]</sup>, **Karela** (*Momordica charantia*)<sup>[14]</sup> It controls blood glucose levels, improves digestion, helps in urinary problems, overall wellbeing, and improve energy levels.

In this patient, *Prameha* led to *Dhatukshaya* and *Ojakshaya*. So, the drugs having properties like— *Deepan*, *Pachan*, *Tridoshaghna*, *Pramehhar*, *Rasayan* and *Ojovardhak* (improves health, vitality and enthusiasm), were selected for the management. The patient responded very well to this *Chikitsa* (Treatment).

### NEED FOR FURTHER RESEARCH

While the results of this case study are promising, it is essential to acknowledge the limitations inherent in single-case reports, including the lack of control groups and the potential for subjective bias in symptom reporting. Future research should aim to conduct larger, controlled studies to validate the efficacy of Ayurvedic interventions in Diabetes Type 2 management and to explore the mechanisms ensuring their therapeutic effects.

### CONCLUSION

Ayurveda considers *Prameha* (DM Type 2) as a condition resulting from imbalances in *Doshas* (*Vata*, *Pitta*, *Kapha*), weak *Agni* (digestive/metabolic fire) and disturbances in the *Basti*. *Hetu* (causative factors) like food such as curd, milk, freshly harvested rice, and foods made from jaggery (unrefined sugar) and excessive

comfort, sleep, and rich, heavy foods are seen as key contributors to *Prameha* (DM Type 2). *Linga* (sign and symptoms) as *Vibandh* (constipation), *Bahumutra* (frequent urination), *Atibhojana* (excessive eating), *Atipipasa* (excessive thirst), and *Tanava* (stress) were seen. The treatment aimed to restore balance through.

- *Nidan Parivarjan* (Avoiding Causes)
- Managing Stress levels.
- *Rasayan* (Rejuvenation Therapies)
- *Satvik Aahar* (wholesome, nourishing diet), Fruits, Salad, Nuts, leaves like *curry*, *Paan*, *neem* etc.
- Avoiding of animal products and packed food because they have high glucose level and increase VLDL, LDL, Triglycerides also reduce HDL.
- *Yoga* and meditation reduce Blood Glucose levels and improve hormonal balance.

*Ayurveda* offers a comprehensive, non-invasive and natural approach to *Prameha* (DM Type 2) by focusing on root causes rather than just on the symptoms.

## REFERENCES

1. American Diabetes Association. Diagnosis and classification of diabetes mellitus. *Diabetes Care*, 2013 Jan; 36 Suppl 1: S67–74. doi:10.2337/dc13-S067. PMID: 23264425; PMCID: PMC3537257.
2. Antar SA, Ashour NA, Sharaky M, Khattab M, Ashour NA, Zaid RT, Roh EJ, Elkamhawy A, Al-Karmalawy AA. Diabetes mellitus: classification, mediators, and complications; a gate to identify potential targets for the development of new effective treatments. *Eur J Pharmacol*. 2023 [Received 2023 Aug 4; revised 2023 Oct 13; accepted 2023 Oct 13].
3. World Health Organization [Internet]. Geneva: WHO; [cited 2011 Mar 17]. Available from: <http://www.who.int/mediacentre/factsheets/fs312/en/>
4. Sapra A, Bhandari P. Diabetes. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023.
5. Ramnandan CJ, Edgerton DS, Kraft G, Cherrington AD. Physiologic action of glucagon on liver glucose metabolism. *Diabetes Obes Metab*. 2011 Oct; 13 Suppl 1: 118–25. doi:10.1111/j.1463-1326.2011.01454.x.
6. Wilcox G. Insulin and insulin resistance. *Clin Biochem Rev*. 2005 May; 26: 19–39.
7. Suvarna R, Shenoy RP, Hadapad BS, Nayak AV. Effectiveness of polyherbal formulations for the treatment of type 2 diabetes mellitus: a systematic review and meta-analysis. *J Ayurveda Integr Med*. 2021 Jan 1; 12(1): 213–22.
8. Acharya JT, editor. *Susruta Samhita of Susruta with Nibandhasangraha commentary by Dalhanacharya*. Sutrasthana, Chapter 33, Verses 4–5. Varanasi: Chaukhamba Surbharati Prakashan; Reprint 2008; p. 212.
9. Acharya VS, editor. *Charaka Samhita by Charaka with commentary by Prof. Ravi Dutt Tripathi*. Indriya Sthana, Chapter 9, Verses 8. Delhi: Chaukhambha Sanskrit Pratishthan; p. 1004.
10. Acharya VS, editor. *Charaka Samhita by Charaka with commentary by Prof. Ravi Dutt Tripathi*. Chikitsa Sthana, Chapter 6, Verses 8. Delhi: Chaukhambha Sanskrit Pratishthan; p. 168–169.
11. Acharya VS, editor. *Charaka Samhita by Charaka with commentary by Prof. Ravi Dutt Tripathi*. Chikitsa Sthana, Chapter 6, Verses 13–14. Delhi: Chaukhambha Sanskrit Pratishthan; p. 170.
12. Phimarn W, Sungthong U, Itabe H. Effects of Triphala on lipid and glucose profiles and anthropometric parameters: a systematic review. *J Evid Based Integr Med*, 2021; 26: 1–9. doi:10.1177/2515690X211011038.
13. A comparative study of *Shilajatu* and *Asanadi Ghana Vati* in the management of *Madhumeha* w.s.r. to type-2 diabetes mellitus Vandana Gupta, Bipin Bihari Keshari<sup>1</sup>, S. K. Tiwari<sup>2</sup>, K. H. H. V. S. S. Narasimha Murthy<sup>2</sup> Departments of Kayachikitsa and 1Maulika Sidhanta, VYDS Ayurvedic College, Khurja, 2Department of Kayachikitsa, Faculty of Ayurveda, IMS Banaras Hindu University, Varanasi, Uttar Pradesh, India Address for correspondence: Dr. Bipin Bihari Keshari, Department of Maulika Sidhanta, VYDS Ayurvedic College, Khurja - 203131, Uttar Pradesh, India. E-mail: doc.vipinkesarwani@gmail.com
14. Sharma S, Kumar RS. Role of Karela in diabetes: a review. *J Res Adv Sci Biotechnol*, 2023 Feb; 2(1): 81–9. doi:10.55544/jrasb.2.1.10.
15. Vidhya Rekha U, Anita M, Bhumathan S, Sadhana K. Known data on the therapeutic use of *Azadirachta indica* (neem) for type 2 diabetes mellitus. *Bioinformation*, 2022; 18(2): 82–7. doi:10.6026/97320630018082.
16. Boruah P, Adiga M. Effective Ayurvedic management of *Madhumeha* (diabetes mellitus): a case study. *J Ayurveda Integr Med Sci*. 2023; 10: 265–71. doi:10.21760/jaaims.
17. Acharya VS, editor. *Charaka Samhita by Charaka with commentary by Prof. Ravi Dutt Tripathi*. Sutra Sthana, Chapter 25, Verse 40. Delhi: Chaukhambha Sanskrit Pratishthan; p. 338.
18. Chowdhury, Dr. Biswaroop Roy. *World's Best, The D.I.P. Diet*. Dr. Biswaroop Roy Chowdhury, 2024.
19. Tripathi B, editor. *Astanga Hridayam of Srimadvagbhata with Nirmala Hindi Commentary*. Sutra Sthana, Chapter 6, Verses 10–12. Delhi: Chaukhamba Sanskrit Pratishthan, p. 88.
20. Tripathi B, editor. *Astanga Hridayam of Srimadvagbhata with Nirmala Hindi Commentary*. Sutra Sthana, Chapter 2, Verse 1. Delhi: Chaukhamba Sanskrit Pratishthan.
21. Tripathi B, editor. *Astanga Hridayam of Srimadvagbhata with Nirmala Hindi Commentary*. Sutra Sthana, Chapter 2, Verse 11. Delhi: Chaukhamba Sanskrit Pratishthan.

22. Sharma PV, editor. *Susruta Samhita. Nidana Sthana* 3/23. Varanasi: Choukhambha Vishvabharti; Reprint 2010. Also referenced: *Atharvaveda* 1/3/6.
23. VP AA, Joshi A, Mudey A, Choudhari S, Raut J, Ahmed S, Choudhari SG. Unlocking the potential: Millets and their impact on diabetes management. *Cureus*, 2024 Apr 29; 16(4).
24. Jagetia GC. A review on the role of *Jamun, Syzygium cumini* Skeels in the treatment of diabetes. *Int J Complement Altern Med*, 2018 Jan; 11(1). doi:10.15406/ijcam.2018.11.00374.
25. Ragavan B, Krishnakumari S. Antidiabetic effect of *T. arjuna* bark extract in alloxan-induced diabetic rats. *Indian J Clin Biochem*, 2006; 21(2): 123–8.
26. Prakash D, Margaret J, Siva Subramanian N, Maheshbhai CM, Babubhai CK, Kiranbhai CS, Popatbhai CU, Lodha HL. Effect of aloe vera juice on type 2 diabetes mellitus among Indian patients. PMCID: PMC10640789; PMID: 37969667.
27. Abu Dayyih W, Manaysa MH, Hailat MM, Zakareia Z, El Hajji F. Influence of castor oil on glycated hemoglobin (HbA1c) in induced type 2 diabetes mellitus in rats. *Jordan J Pharm Sci*, 2021; 14(3): 341.
28. Chhabra V, Wadhawan M, Katiyar A, Khuntia BK, Sharma V, Rathore S, Kaur P. Understanding the mechanism of Trikatu in type 2 diabetes mellitus and lipid-related metabolic disorders: a network pharmacology approach. *BioRxiv*, 2022 Jun 22. doi:10.1101/2022.06.22.496819.