



A CLINICAL CASE STUDY ON MADHUMEHA (DIABETES MELLITUS TYPE II) MANAGEMENT: A SILENT KILLER DISEASE IN INDIA

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Abstract

Background As a result of sedentary lifestyles and bad eating practices, which are the main etiological causes of the ailment, diabetes has grown significantly more prevalent in recent years. According to the most recent IDF data, there are now 83.5 million diabetics residing in India. Ancient Ayurvedic texts mention Madhumeha, a kind of Kaphaj Prameha characterized by the passing of an excessive amount of pleasant urine. The primary symptoms of a 43-year-old male patient who visited the OPD were body aches, a sweet taste in his mouth, a burning sensation in his sole, excessive hunger, excessive thirst, excessive mental strain, and increased frequency of urination.

Methodology This case study material collected from OPD of PMT's Ayurved College, Shevgaon Dist. Ahmednagar

Result (Findings) after two weeks of starting therapy, increased blood sugar levels fell to pre-diabetic levels, and after 24 days, sugar levels returned to normal. Shamana Aushadhis produced excellent results. **Conclusion** Based on physical results and research, Madhumeha was diagnosed with type-2 diabetes. Sanshamana Aushadhi was used in the treatment plan, along with dietary and lifestyle modifications. Seven-day interval follow-up visits were undertaken on a regular basis for one month. After a month of therapy, significant benefits were discovered.

Keywords: Diabetes mellitus type 2, Madhumeha, Lifestyle disorder, Diet etc.

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BACKGROUND

Because diabetic patients' urine attracted ants, ancient Indian physicians gave the disease the name Madhumeha. Madhumeha is a kind of Kaphaj that corresponds to the sickness Prameha. Since the beginning of time, mankind have been afflicted by this ailment, called in Ayurveda as mahagada¹, and the evidence for it and its effects is mounting. It is a collection of clinical conditions that also includes metabolic syndrome, prediabetes, diabetes, and obesity. Ayurvedic texts refer to "prabhootavila mutrata," or the excretion of large volumes of turbid urine, as the primary symptom of the illness Prameha. This symptom is comparable to the sign of diabetes mellitus as it is described in modern literature.² According to epidemiological studies, there will be 523.4 million new cases of adult-onset diabetes worldwide in 2019.³

India, which has the second-highest number of diabetics globally, is not an exception to this global trend. Diabetes mellitus is a group of metabolic diseases characterized by chronic hyperglycemia brought on by a defect in insulin synthesis, insulin action, or both. Frequent urination (polyuria), increased thirst (polydipsia), and increased hunger are all signs of hyperglycemia (high blood sugar) (polyphagia). If uncontrolled, diabetes mellitus can lead to glaucoma, diabetic ketoacidosis, non-ketotic hyperosmolar coma, heart disease, stroke, kidney failure (nephropathy), foot ulcers, retinopathy, cataracts, and foot ulcers.⁴

Tridoshaja vyadhi Santarpanajanya Santarpanajanya tridoshaja vyadhi is Prameha. Santarpanajanya tri-dosha is Prameha. Sushruta claims that excessive pramehotpadaka ahara-vihara vitiates aparipakva Vata, pitta, and Kapha, which then combines with medodhatu⁴. Through the mutravaha srotas, these vitiated dosha and dhatus generate Prameha. Ayurveda classifies Madhumeha (Vataja Prameha) as asadhya, or incurable, even if it is treatable. Examples of Ayurvedic management include Pathya aahara vihara, Shodhana chikitsa (panchakarma therapy), and Shamana chikitsa (drug intake) (dietary modification and lifestyle changes).⁵

There are in-depth descriptions of Madhumeha in older Ayurvedic literature. This disorder has a number of risk factors, etiological causes, and effects that are thoroughly explored. According to Ayurveda, Madhumeha is a kind of Prameha. The culmination of all Prameha forms is Madhumeha. Prameha is caused by a sedentary lifestyle, excessive sleep, and a diet high in meat, fatty foods, dairy products, and other sweet foods. Both genders are equally affected by the sickness, which is more common in males over 55 than in females. Poor

eating practices and a sedentary lifestyle-induced obesity are hastening the progression of Type II Diabetes Mellitus.

Reduced insulin secretion, reduced glucose absorption, and increased glucose synthesis result in hyperglycemia, a metabolic disorder defined by diabetes mellitus (Madhumeha). The metabolic dysregulation caused by diabetes mellitus results in secondary patho-physiological changes in several organ systems. The two kinds of diabetes are type I, or Insulin Dependent Diabetes Mellitus (IDDM), and type II, or Non-Insulin Dependent Diabetes Mellitus (NIDDM). The main feature of type I diabetes is a total or almost complete absence of insulin. The characteristics of Type II Diabetes Mellitus include variable levels of insulin resistance, impaired insulin secretion, and increased glucose production. Traditional indicators and symptoms of diabetes mellitus include polydipsia (increased thirst), polyuria (frequent urination), and polyphagia (increased hunger).

METHODOLOGY –

This article material collected from OPD of PMT's Ayurved College, Shevgaon Dist. Ahmednagar..

STUDY TYPE –

Clinical Interventional Study

SAMPLE TYPE –

Single Case Study

METHOD USED –

Simple Random Sampling

DRUG USED FOR INTERVENTION –

Tab. Chandraprabha Vati, Tab. Madhugrita Vati, Tab. Vasant Meha Rasa Vati, Tab. Diabecon DS Vati, Kayakalp Kwath

YOGASANA USED –

Balaasana, Mandukasana, Ustrashana,

CASE STUDY

A 43-year-old male patient with Mootraadhikya, Angamarda, Madhuryamasyata, Karapadadaha, Pipasadhikya, Bahumutrata, Alasya, Kandita Nidra for more than 1 Year, and other associated complaints of Kshudha Vriddhi (Patient is vegetarian but used to eat an extra greasy and fatty diet), as well as a tendency of eating junk food and sleeping throughout the day. Micturition occurs 8-12 times throughout the day and 3-4 times at night, and the patient's bowel habits are inconsistent, with slight constipation (once every week, firm stool),

and no addictions. For the previous year, the patient had been diagnosed with type 2 diabetes mellitus. He was on Glibendamide, Glimstar M1, and Voglibose Medication, but he was inconsistent in taking his medication and having his blood sugar levels checked regularly. His Father and mother both has diabetes, according to his family history. In addition to having a dry tongue, the patient's general examination revealed a pulse rate of 82 beats per minute, a respiratory rate of 19, and a blood pressure reading of 110/80 mm Hg. He was 168 cm tall, weighed 82 kg, and had a BMI of 29.1 kg/m².

His respiratory, digestive, circulatory, central nervous, and locomotor systems all passed inspection with no anomalies found. His blood tests on November 1, 2022, showed that his HbA1c was 8.2%, his fasting blood sugar level was 307 mg/dl (normal range: 70-120 mg/dl), and his postprandial blood sugar level was 324 mg/dl (normal range: 70-140 mg/dl). 4-6% is considered normal. Based on the patient's presentation, Madhumeha was identified as the disease (Diabetes mellitus type-2). He was advised by a modern doctor to take Injection Humalog 25/75 (Insulin immuno) 14 units before breakfast and 8 units before dinner for the aforementioned complaints and investigation findings, but he preferred to try Ayurvedic remedies and visited the hospital for the first time on November 1, 2022.

TREATMENT PROCEDURE

For 30 days, the following oral drugs were given:

- Take two tabs of Tab. Chandraprabha Vati, Tab. Madhugrita Vati, twice a day with lukewarm water after each meal.

- Take one tab of Tab. Diabecon DS two times a day with lukewarm water before each meal.
- Take Madhu Meha Rasa (100 mg), twice a day before meals with honey.
- Take Kayakalp Kwath before meal in morning time once a day.
- Take Yoga like Mandukasana, Balaasana, Ustrashana, etc. for 30 mins.

The following treatment program was followed after 30 days:

- Take two tabs of Tab. Diabecon DS three times a day with lukewarm water before each meal.
- Take two tabs of Tab. Madhugrita Vati and two tabs of Chandraprabha Vati twice a day with lukewarm water after each meal.
- Take Yoga like Mandukasana, Balaasana, Ustrashana, etc. for 30 mins.

In addition to the previously mentioned medications, the patient was also told to refrain from taking Divaswapna and to consume 20 cc of Amla juice in the morning (sleeping during the day).

RESULT

At the initial follow-up, the patient reported a reduction in the previously stated symptoms (after 8th days of medication). Improvements were made in physical aches, sleep, thirst, and appetite as well as the frequency of micturition. The patient's symptoms have greatly improved by the second follow-up (16th day). The patient reported feeling lighter and more active in everyday activities, as well as having less mental stress and foot burning, on the third follow-up (the 24th day).

Table No. 1 Result And Fasting, Post Prandial Blood Sugar

RESULT (Follow Up)	Fasting blood Sugar	Postprandial blood Sugar
Reference point (0 Day) [1 Nov, 2022]	307 mg/dl	324 mg/dl
Follow up-1(8 th Day) [9.Nov.2022]	252 mg/dl	298 mg/dl
Follow up-2 (16 th Day) [16.Nov.2022]	168 mg/dl	182 mg/dl
Follow up-3 (24 th Day) [24.Nov.2022]	119 mg/dl	136 mg/dl

On November 1, 2022, the patient had a serum creatinine level of 0.9 mg/dl, a serum cholesterol level of 148 mg/dl, a serum triglyceride level of 177 mg/dl, a VLDL level of 15 mg/dl, an HDL level of 22 mg/dl, and an SGOT level of 120 U/L and SGPT level of 198 U/L. On November 24, 2022, he had a total bilirubin level of 0.9 mg/dl, total proteins of 4.7 g/dl, an alkaline phosphatase

level of 189.3 IU/L, and improved SGOT and SGPT levels of 48 and 63 U/L, respectively. Lower fasting and postprandial blood sugar levels, as well as SGOT and SGPT levels, as well as an improvement in subjective symptoms and indications.

DISCUSSION

Vata-Kapha is the pradhan tridoshaja vyadhi of Madhumeha. There are two varieties of Madhumeha: Sahaja (type-1) and Apathyanimittja (type-2).⁶ Types that may be connected to Sahaja Madhumeha include Krisha, Dhatukshayajanya, and Apatarpanjanya, whereas Types that can be related to Apathyanimittja Madhumeha include Sthula, Avaranjanya, and Santarpanjanya. In order to treat this patient's apathyanimittja Madhumeha, it is important to employ drugs that target the main symptoms of the condition, such as media dhatu, kleda, Kapha, and meda dhatvagni, as well as those that have deepen, pachanga, lekha, Vata-kaphahara, and medohara qualities.⁷

Vasant Kusumakar Rasa is mentioned by Yogaratnakar in Prameha Chikitsa Adhyaya. It is a potent anti-diabetic medication that functions by fusing the effects of each of the drug's components.⁸ Vasa, Haldi, Ikshu, Kadali, Kamal, Chameli, Shatavari, Chandan, Praval Pishti, Ras Sindoor, Mukta Pishti, Abhrak Bhasma, Swarna Bhasma, Rajat Bhasma, Loha Bhasma, Naga Bhasma, Vanga Bhasma, Ayurvedic medication trivanga bhasma contains tin, lead, and zinc.⁹ According to studies and allusions in ancient manuscripts, it is also a potent antidiabetic. A hypoglycemic or anti-diabetic medication is guduchi.¹⁰ The combination of Tab. Chandraprabha Vati, Tab. Madhugrita Vati, Tab. Vasant Meha Rasa Vati, Tab. Diabecon DS Vati, and Tab. Kayakalp Kwath therefore led to a reduction in blood sugar levels.¹¹

Some of the herbs used to make Madhughrit Vati include Powders of - Chandraprabha Vati 200mg, Shudhh Shilajit (Asphaaltum Punjabiannum) Exd. 50mg, Extract of : Giloy (Tinospora Cordifolia) St. 100mg, Indrayana (Citrullus Colocynthis) Rt. 10mg, Karela (Momordica Charanta) Fr. 50 Mg, Chirayata (Swertia Chirata) Wi. Pi. 50 Mg, Shatavar (Asparagus Racemosus) Rt. 25 Mg, Ashwagandha (Withania Somnifera) Rt. 25mg, Excipients: Gum Acacia Arabica) 8 Mg, Talcum (Hydrated Magnesium Silicate) 8 Mg, MCC (Microcrystalline Cellulose) 16 Mg, Croscarmellose Sodium (Sodium Carboxymethyle Cellulose) 8 Mg. All of the substances on the above list have hypoglycemic and anti-diabetic effects, making them effective in the treatment of diabetes.¹²

LIMITATION OF STUDY –

1. Sample Size should be large at least 250 patient
2. Statistical Data and Statistical Test should be applied in large sample size.

MODE OF ACTION MADHUGHRIT VATI¹³

Diabetes is a metabolic disorder that significantly affects how the body uses the broken-down blood sugar. Blood glucose levels that are out of control might significantly damage vital organs. They consist of the eyes, heart, pancreas, kidneys, and so on. The persistent condition could need the use of allopathic drugs. If someone has diabetes symptoms and opts for natural treatment, Ayurveda is a huge asset. There are several herbs, spices, and food alternatives available in Ayurveda. The answers of this science can be used to cure almost all medical conditions. And according to Ayurveda, there is one such amazing combination of herbs that offers a complete therapy for diabetes. Diabetes is treated and managed with a specialized Ayurvedic medication called Madhunashini Vati. It assists the body to keep better control over blood glucose levels through a number of actions. Additionally, Madhunashini Vati does a fantastic job of lowering the risk of complications from diabetes. They take place as a result of the blood vessels and neurons being impacted by high blood glucose levels. Following the doctor's advice and using this medication:

- Protects the kidneys, blood vessels, heart, eyes, nerves, and overall health of a diabetic
- Helps the body's organs perform their functions more efficiently, increasing their efficiency.
- Aids in the organs of the body having a long, healthy life.

INGREDIENTS

- Powders of - Chandraprabha Vati 200mg,
- Shudhh Shilajit (Asphaaltum Punjabiannum) Exd. 50mg,
- Extract of : Giloy (Tinospora Cordifolia) St. 100mg,
- Indrayana (Citrullus Colocynthis) Rt. 10mg,
- Karela (Momordica Charanta) Fr. 50 Mg,
- Chirayata (Swertia Chirata) Wi. Pi. 50 Mg,
- Shatavar (Asparagus Racemosus) Rt. 25 Mg,
- Ashwagandha (Withania Somnifera) Rt. 25mg,
- Excipients: Gum Acacia Arabica) 8 Mg,
- Talcum (Hydrated Magnesium Silicate) 8 Mg,
- MCC (Microcrystalline Cellulose) 16 Mg,
- Croscarmellose Sodium (Sodium Carboxymethyle Cellulose) 8 Mg.

MODE OF ACTION OF CHANDRAPRABHA VATI¹⁴

You seem brilliant and your body is strengthened by Chandraprabha vati, whose names are taken from the Sanskrit words "Chandra" for "moon" and "prabha" for "glow." Using this efficient treatment

to decrease Prameha is strongly encouraged by the ayurvedic text Sarangadhar Samhita (i.e. urinary tract infection). Ashmari (urinary calculi), Vibandha (constipation), Shoola (abdominal colic), Mutrakrichra (dysuria), Anaha (bloating), Mutraghata (urinary blockage), Pandu (anemia), Haleemaka (liver cirrhosis), Antravruddhi (hernia), and Arsha are a few conditions for which it is also highly helpful (haemorrhoids). Chandraprabha Vati, also known as Chandraprabha Gulika or Chandraprabha, is a potent anti-inflammatory Ayurvedic medication that is used to treat a number of disorders affecting the bones, joints, thyroid gland, kidney, urinary system, and pancreas. A potent remedy for the treatment of glycosuria, an anomaly brought on by the presence of sugar in the urine, Chandraprabha vati has been shown to significantly reduce the aberrant glyceemic content of the urine. It has also been demonstrated to be particularly effective in treating proteinuria by addressing the underlying causes, such as mental stress and fever, and preventing the excretion of essential proteins through urine.

MODE OF ACTION OF MADHU MEHA RASA¹⁵

Meha Rasa Madhu The ushna virya and katu paka qualities of the laghu, ushna, and tikshna gunas, as well as their effects on the body's bahu sleshma, abadh meda, and the limitation of srotasa brought on by their shoshana and vilayana, all serve to release these states from the body. By dilating the channels, removing blockages, and calming the Kapha Doshas, katu rasa stimulates the pachakagni. Its main pharmacological activity is Amapachana, which stabilizes Ama (it stops Ama from being processed, a byproduct of digestive failure) and promotes insulin receptor activation, which facilitates glucose absorption in insulin-sensitive tissues including muscle, lipids, and other tissues (Aavarana effects). Tikta Rasa has the power to improve the fundamental cellular metabolism due to its Shodhana properties.

CONCLUSION

Madhumeha is a multifactorial silent killer that has to be treated right away to prevent more problems. Based on the information provided above, it can be concluded that Madhumeha may be treated in an Ayurvedic manner by using Shamana aushadha and making the appropriate dietary and lifestyle changes. With increased blood sugar levels decreasing to pre-diabetic levels within one week of starting therapy and reverting to normal after 24 days, shamana aushadhis in this case showed excellent outcomes. Additional study on a large

population can be conducted to verify the treatment strategy.

CONFLICT OF INTEREST –

Nil

SOURCE OF SUPPORT –

Nil

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