

Ayurvedic Management of Type II Diabetes Mellitus: A Case Study

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Abstract Diabetes mellitus is a major growing concern all over the world. There are not many published literatures available documenting the effectiveness of Ayurveda intervention on diabetes mellitus. This report is about a case in which successful reversal of diabetes mellitus was achieved in a patient who reported with glycosylated Hb percentage (HbA1C) as high as 11.6%. patient had classical symptoms of diabetes mellitus, like- increased frequency of micturition, polydipsia, fatigue and sudden weight loss. His fasting blood glucose level was 401mg/dl and post prandial glucose level of 569.4mg/dl. Furthermore, his HbA1C was 11.6%. patient was diagnosed with Kaphaj Prameha based on his specific clinical symptoms. Treatment was planned and given according to classical Ayurveda intervention for Kaphaj Prameha. The patient responded well to the treatment. His HbA1C reduced to 5.8% in a span of 4 months and furthermore, to 5.5% in 9 months. The case report shows the effectiveness of Ayurvedic intervention in diabetes mellitus. Since it is a case report, its scope is constrained; yet, it can be interpreted as information that could result in new studies and developments in the area of Ayurvedic clinical practice.

Keywords: Diabetes Mellitus type II, Kaphaj Prameha, Vasant Kusumakar Rasa, Lifestyle, Hyperglycaemia.

INTRODUCTION

Diabetes mellitus (DM) is a chronic metabolic disorder characterized by persistent hyperglycaemia. It may be due to impaired insulin secretion, resistance to peripheral actions of insulin, or both. According to the International Diabetes Federation (IDF). According to the International Diabetes Federation (IDF), approximately 415 million adults between the ages of 20 to 79 years had diabetes mellitus in 2015.¹ According to a WHO report, the global diabetes prevalence in adults aged 20–79 years rose from 7% in 1990 to 14% in 2022.² The analysis emphasizes the need for stronger global action to address both rising disease rates and widening treatment gaps, particularly in low- and middle-income countries. DM is proving to be a global public health burden as this number is expected to rise to another 200 million by 2040. Chronic hyperglycaemia in synergy with the other metabolic aberrations in patients with diabetes mellitus can cause damage to various organ systems, leading to the development of disabling and life-threatening health complications. Lately there have been numerous researches conducted which showed glucose lowering effects of ayurvedic combinations, also no significant side effects have been reported yet. Reporting of successful individual cases from ayurveda is very important as they may prove to be useful and take us to the right direction in formulating a standard ayurvedic treatment protocol for specific disorders.

Case Report

A 52 years normotensive male presented on 29/09/2022 at Bhardwaj Ayurveda Multi-Specialty Ayurvedic Clinic in Patna, Bihar with complain of increased frequency of micturition (Mootradhikya), Polydipsia (Pipasadhikya), Disturbed Sleep (Anidra) due to frequent micturition, Weakness (Daurbalyata), gradual Weight loss, Irregular bowel movement for 3 months. Patient was treated previously by some local Ayurvedic Physician but didn't get any relief. Then he came at Bhardwaj Ayurveda Clinic for further better management. His previous Fasting blood sugar (27/06/2022) was 401.00 mg/dl and Post Meal Plasma blood sugar level was 569.40 mg/dl. On 27/07/2022 his Fasting & Post Meal blood sugar level was 284 mg/dl and 460 mg/dl respectively. On 22/09/2022 he came for follow up, his Fasting Blood Sugar & Post Meal Blood Sugar were 312.00 mg/dl and 535.00 mg/dl respectively, and his HbA1C on 15/10/2022 was 11.6%. Patient was too anxious about his hyperglycaemic reports. The personal history of the patient was: non-vegetarian, with occasional habit of junk food, regular intake of sweets and less physical workout. Frequency of micturition was 8-9 times and 5-6 times at night followed by polydipsia. Patient having didn't had any type of addiction like alcohol, smoking, tobacco etc. His past history

revealed that he was suffering from T2DM for last 3 months. He was on some ayurvedic medicines but there was no such previous prescription or document available to him except blood sugar report. Family history revealed that his father was diabetic. On the first visit the patient said that he wanted to treat his hyperglycaemia only by ayurvedic because he had good faith on ayurvedic system of medicine.

The general examinations of patient revealed dryness of mouth, coated tongue, pulse rate – 76/min, BP – 110/80 mm/Hg, Respiratory rate – 16/min, height – 161 cm, Body weight – 53kg. His other systemic examination such as Respiratory, Cardiovascular, Gastrointestinal, Central nervous system and Locomotor system evaluations, were within normal limits. Based on the clinical presentation and blood investigation of the patient he was diagnosed as Kaphaj Prameha (T2DM).

Diagnostic assessment

Test on patient for fasting and post prandial sugar were conducted on 29/09/22. The values were as follows- Fasting - 312mg/dl and Post meal - 535mg/dl. HbA1C as on 15/10/22 was 11.6%. Diabetes mellitus in this case is correlated with Prameha on the basis of symptoms as mentioned in ayurveda classics. The general diagnostic symptoms of Prameha as observed in this case are Prabhoot-avil-mutrata (excess and dense urine), Pipasa aadhikya and Shosh (weight loss). The associated symptoms include Gala-Talu Shosh, Mukh Shosh, Daurbalya (generalised weakness) and fatigue. The prodromal symptoms that lead to diagnosis of Prameha were desire to sit and sleep, Anga Gandha, numbness in extremities, Karpada Daha.³ Patient showed symptoms more that of Kapha hence he was diagnosed with Kaphaja Prameha.

Treatment Plan & Progress:

On the basis of patient's cardinal features a model prescription has been prescribed. The patient was advised to follow strict diabetic diet with proper morning walk, specific yoga practice. Patient was also advised for proper follow-up every 15 days with fresh blood reports of Fasting & Post Meal blood sugar and every 3rd month with HbA1C. on his 1st visit (29/09/2022) the following medicines were prescribed to him for oral use and patient was asked to come for follow-up on every 15 days interval.

- Tab Vasantkusmakar Rasa⁴- 1 tab with Vairyadi Kashayam⁵ 15ml twice daily 1 hr before lunch and dinner.
- Pramehahar Churna (Anubhut Yoga)- 3gm twice daily with warm water after meal.
- Amreeplus Granules⁶ 3gm twice daily with warm water at morning and evening in empty stomach.
- Patient was advised to follow Pathya-Apathya strictly.

On his 8th visit (23/02/2023) on the basis of his improved clinical condition and his glycaemic index few medicines had been stopped and following prescription was given-

Tab Vasantkusmakar Rasa- 1 tab with Vairyadi Kashayam- 15ml twice daily 1hr before lunch and dinner.

- Pramehahar Churna (Anubhut Yoga)- 3gm twice daily with warm water after meal.
- Patient was advised to follow Pathya-Apathya strictly as usual.

On his 12th visit (20/07/2023) on the basis of his improved clinical condition and his glycaemic index again one of medicine from his prescription had been stopped and following prescription was given-

- Tab Vasantkusmakar Rasa 1 tab with Vairyadi Kashayam 15ml twice daily 1hr before lunch and dinner.
- Patient was advised to follow Pathya-Apathya strictly as usual.

Tab Vasantkusmakar Rasa and Vairyadi Kashayam were continued for next 7 months, during this period patient regularly checked his Fasting and Post meal blood sugar level on every 15 days interval and HbA1C on quarterly basis. During the treatment period patient's other routine blood investigation were also performed to evaluate his general wellness and to access any side effects. After the 7th month patient was advised to take Tab Vasantkusmakar Rasa only twice daily before lunch and dinner with warm water. After patient's stable blood report and clinical improvements, few months later, Tab Vasantkusmakar Rasa was also stopped and he was advised to take Tab Nisakathakadi Kashyam⁷ 2tab twice daily before lunch and dinner. On the 1st follow-up after 15 days patient reported a significant change in his clinical symptoms as well as in fasting blood sugar level (FBS – 287 mg/dl), and his HbA1C was 11.6%. On the third follow up patients improved clinically as well as his blood sugar levels were also significantly lowered. His FBS was 134 mg/dl and PPBS was 180 mg/dl. All the medications were continued as same. On his 4th visit his clinical symptoms were almost subsided and FBS & PPBS were 111 mg/dl and 184 mg/dl

respectively. On his 7th visit he was doing very well and his blood reports had further improved with FBS – 101 mg/dl, PPBS – 111 mg/dl, HbA1C being 5.8%. Now at present time patient is doing very well with his blood sugar and glycaemic index levels being normal.

Table 1: Shows the improvement in blood sugar and glycaemic index levels of the patient.

Follow Up	Fasting Blood Sugar (FBS)	Postprandial Blood Sugar (PPBS)	HbA1C
Before Treatment (27/06/2022)	401.00 mg/dl	569.40 mg/dl	NA
On 1 st visit (29/09/2022)	312.00 mg/dl	535.00 mg/dl	NA
1 st follow up (15/10/2022)	287.00 mg/dl	NA	11.6%
2 nd follow up (02/11/2022)	134.00 mg/dl	180.00 mg/dl	NA
3 rd follow up (16/11/2022)	111 mg/dl	184 mg/dl	NA
4 th follow up (30/11/2022)	107.00 mg/dl	142.00 mg/dl	NA
5 th follow up (17/12/2022)	116.00 mg/dl	129.00 mg/dl	NA
6 th follow up (23/01/2023)	109.00 mg/dl	111.00 mg/dl	5.8%
7 th follow up (23/02/2023)	117.00 mg/dl	107.00 mg/dl	5.5%
8 th follow up (2/04/2023)	110.00 mg/dl	118.00 mg/dl	NA
9 th follow up (22/05/2023)	105.00 mg/dl	108.00 mg/dl	NA
10 th follow up (20/07/2023)	129.00 mg/dl	97.00 mg/dl	5.5%

DISCUSSION:

Prameha or diabetes mellitus, is a condition with a high global prevalence, impacting a significant portion of the adult population. According to the World Health Organization, a staggering 422 million adults worldwide are living with diabetes. In India, there are estimated 77 million people above the age of 18 years are suffering from diabetes (type 2) and nearly 25 million are prediabetics (at a higher risk of developing diabetes in near future)⁸. Diabetes prevalence is higher in urban areas as compared to rural areas in India. The prevalence of diabetes increases with age, with a higher percentage of individuals diagnosed with diabetes in older age groups. Predictions indicate a continued rise in the number of people living with diabetes, emphasizing the need for preventive measures. Lifestyle factors, such as poor diet and lack of physical activity, are major contributors to the rising prevalence of diabetes. Being overweight or obese is a significant risk factor for developing type 2 diabetes. Genetics also play a role in diabetes susceptibility, with some individuals being more predisposed to the condition. In our classical texts Prameha is defined as Apathya nimittaj, Vata- Kapha Pradhan tridoshaja vyadhi. Life style factors like Ashyashukham (sit comfortably in a cushioned seat), Swapnashukham (sleep on a comfortable padded bed), excessive consumption of Dadhi (curd), Gramya, Jaliya and Anup Mamsa, milk, excess sweet food, less physical activity are also contribute to Prameha. Due to excessive habit of these diet and life style primarily does the Agnimandya or a weakened digestive fire, leading to the production of Ama (undigested food residue). This Ama affects the Adya Rasa Dhatu (the primary tissue formed from digested food), disrupting the natural process of tissue formation and causing an imbalance in the Kleda (excretory waste). Lifestyle factors like excessive sleep, inactivity, and consumption of certain foods also contribute to Prameha.

In our classical text Bhaisajya Ratanavali Rasayan Prakaran and Yogaratnakar Prameha Chikitsa have mentioned the use of Vasantkusmakar Rasa in Prameha. As mentioned in classical text the Vasantkusmakar is indicated in the all 20 types of Premaha, Kshaya Roga, increase the strength, excellent Rasayana, promotes longevity, improves agni. The key ingredients of Vasantkusmakar Rasa are Swarn Bhasma, Rajat Bhasma, Vang Bhasma, Naga Bhasma, Kant Lauh Bhasma, Abhrak Bhasma, Praval Bhasma, Moti Bhasma, Ikshu, Go Dugdha, Vasa, Sugandhbala, Kadali, Malti Puspa etc. All of these drugs are excellent immunomodulators. The sahapana drug Vairyadi Kashayam which is an Ayurvedic proprietary medicine which contains Bala, Vairi, Amrita, Dhatri and Nisa. Vairyadi Kashayam is specially indicated in Prameha, neurological problems like numbness due to diabetes. Pramehahar Churna (Anubhut Yoga) which contains Triphala^{9,10,11}, Kutaki¹², Gudmar¹³, Methi Beej¹⁴, all these drugs are antioxidant, anti-inflammatory, digestive, and immune-boosting effects. All are known for supporting digestive health, enhancing immunity, and providing detoxification benefits. Amree Plus Granules is a Ayurvedic proprietary patent drug which is a good stimulator of carbohydrate metabolism. Nisa Kathakadi Kashayam described in Sahasrayogam contains Kataka, Khadira, Dhatri, Vairi, Darvi, Samanga, Vidula, Rajani, Patha, Chutabija, Haritaki and Mustaka. The majority of the drugs having Kashaya Tikta Rasa hence it helps to reduce Kapha and Medas thus helping to alleviate the disease.

All these formulations possess good anti-diabetic and hypoglycaemic activity so, they are effective in the management of Diabetes mellitus.

CONCLUSION:

Prameha is a multifactorial silent killer which is affecting a mass adult population and needs to be treated as early possible to avoid complication and its comorbidities. From the above data it can be concluded that Ayurvedic management of Prameha can be achieved by proper use of Shamana Aushadhi and following proper dietary habit and lifestyle changes. In this case Shamana Aushadhis has given excellent result and within two weeks of starting the treatment the elevated hyperglycaemic level dropped and within two months patient's blood sugar level was almost within normal range. Also, within a year of proper treatment patient's blood sugar level and HbA1C level got normal and his medications were gradually reduced. Further studies can be carried out on a large population to validate the treatment plan.

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