



A SINGLE CASE STUDY ON *Madhumeha* w.s.r. TO DIABETES MELLITUS (TYPE II)

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ABSTRACT

*Diabetes mellitus, a non-communicable disease commonly that emerges various health issues globally along with huge social and economic consequences. High incidence of diabetes mellitus categorized by the metabolic activity of hyperglycemia those results in imperfection of insulin oozing, insulin exploits or both. Diabetes symptoms are excessive thirst, frequent urination, sweating, blurred vision, sudden weight loss, fatigue and slow healing sores. Chronic hyperglycemic complications are seen in nephropathy, retinopathy, neuropathy, cardiovascular disease, kidney, blood vessels, stroke and death, they can be prevented with appropriate treatment. A 54 years old male patient treated in the OPD of Rishikul Campus, Haridwar from 27th October 2022 with a complain of generalised weakness, weight loss, increase of urination and attraction of ant towards the excreted urine for 7 months. Examination, laboratory investigations and history leads to diabetes mellitus. Ayurvedic drugs which were mentioned in different texts were given to the patient. It shows the effective results in the management of *Madhumeha* (Diabetes mellitus).*

KEYWORDS- *Diabetes mellitus, Insulin, Hyperglycemia, Ayurved*

INTRODUCTION

Diabetes mellitus is a metabolic disorders where metabolism of carbohydrate remain underused which leads hyperglycemia. The most common symptoms are excessive thirst, frequent urination, sweating, blurred vision, sudden weight loss, fatigue and slow healing sores. It also considered as lifestyle disorders and its prevalence is rising very rapidly in developing countries. Its leads complication like nephropathy, neuropathy or retinopathy. Though there are mainly two types of diabetes – Type 1 and Type 2 but prevalence rate of type 2 diabetes is more. Type 1 diabetes is mainly autoimmune- mediated where absolute insulin deficiency present and its frequency less than type 2 diabetes. Type 2 diabetes is either due to insulin resistance and/or abnormal insulin secretion.

Madhumeha (Prameha)

Ayurvedic remedies for *Madhumeha* (diabetes mellitus) are the oldest and are classified as *Prameha*. *Pramehas* are a group of urinary illnesses characterised by excessive urination and many aberrant features caused by *Doshic* imbalances. *Prameha* is caused primarily by a lack of exercise and poor dietary habits. The basic causes of this ailment include excessive food intake in the categories of *Ushna*, *Snigdha* and *Guru*- fish and curd are good examples. The etiological causes for *Prameha* are foods that enhance *Kapha*, *Medhas* and *Mootra*. *Prameha* is derived from the words *Pra* (overflow) and *Meha* (*Ksharane*) (urine passing). *Prameha* is passing turbid urine as a result (*Prabhootha avila mootrata*).

Case Report: A 54 years old male patient was treated in the OPD of Kayachikitsa of Rishikul Campus, Haridwar from 27th October 2022 with a complain of generalised weakness, weight loss, increase of urination and attraction of ant towards the excreted urine since 7 months. There was history of dryness of mouth, palate and throat. He was diagnosed as type 2 DM 2 years back and did not take any medicine and after that he had come to the OPD of Rishikul Campus, Haridwar on 24th October 2022 to take ayurvedic treatment. He was advised to do lab investigations. Then he had done the investigations on 27th October 2022. Apart from this he didn't suffer from other medical problems like HTN, asthma, thyroid disorder etc. Patient was doing private job in a company. There was family history.

**Table 1****General Examination**

Height	168cm
Weight	73kg
BP	130/90mmkg
Pulse	82/min
Temperature	98.6
General condition	Not good

Family History

Father- DM

Mother- Not Any

S/E (Systemic examination)

CVS-S1S2 NORMAL

CNS-Conscious Oriented

GIT-Liver, Spleen Not Palpable

Asthtavidha Pariksha

Nadi- 82/min

Mutra- Atipravarti

Mala- Sama

Jihva- Sama

Shabda- Normal

Sparsha- Normal

Drik- Normal

Akriti- Average

Dashvidha Pariksha

Prakriti- Kaphaj Vataj

Vikriti- Vata Kapha and Medodhatu dushti

Sara- Meda

Samhanana- Madhyam

Satmya- Madhyam

Satva- Madhyam

Pramana- Madhyam

Ahara shakti- Madhyam

Vyayama shakti- Madhyam

Vaya- Madhyavastha

Investigations (Before Treatment)

- FBS- 140.8 mg/dl
- PPBS- 210 mg/dl
- HBA1C- 7.6%
- Urine examination- In urine examination sugar is present.
- As per ayurveda text the symptoms of *Madhumeha* are *Prabhoota mutrata, Avila mutrata, Shrama* etc.

MATERIAL AND METHODS

Sr. No	Name of Drug	Dose of drug	Frequency and Anupana
1.	<i>Amalaki</i> powder	50gm	
2.	<i>Haridra</i>	10gm	
3.	<i>Vijayasara</i>	50gm	Mix the combination and
4.	<i>Gurmara</i>	20gm	take 5gm BD with luke
5.	<i>Methika</i>	20gm	warm water 30min before
6.	<i>Bilva patra</i> powder	50gm	meal.



Advice-

Pathya (Do's)

1. Diet- Old cereals like *Shali* rice, *Shastika* rice, Barley, *Munga*, *Kulathi*, *Arhar*, Bitter leafy vegetables (*Karela*, *methi*, *parvala* etc.) Fresh fruits (*Jamuna*, *amla* etc)
2. Lifestyle- Regular exercise is recommended 4-6 times/ week. *Pranayama*, *yogasana* (*Bhujangasana*, *Sarvangasana*, *Pawanmukta Asana*).

Apathya (Don't's)

1. Diet- Vinegar, *Tusodaka*, *Sura*, *Asava*, New grains, Oil, milk, ghee, Sugarcane products, Preparation of rice flour, Sour substances, Meat of domestic, Aquatic animals
2. Lifestyle- Avoid sitting, Day sleeping, *Dhumpana*, *Swedana*, Controlling natural urges like *Mutravega* (*Vega Dharana*).

RESULT

Criteria	Before Treatment (27 October 2022)	After Treatment (1 February 2023)
<i>PrabhootaMutrata</i> (Polyuria)	7-8 times a day and 3-4 times at night	3-6 times a day and 1-2 times at night
<i>Shrama</i> (Weakness)	Present	Absent
<i>Mukha kantha shosha</i> (Dryness of mouth and throat)	Moderate	Absent
FBS	140.8 mg/dl	110.4 mg/dl
PPBS	210 mg/dl	150 mg/dl
HBA1C	7.6%	6.8%

HBA1C Before-

NOVUS
NRI Lab

Patient ID : 102211441
Name : ██████████
Age/Gender : Male/54 Yrs
Ref. By Doctor : Dr.Chanchal
Address :
Date : 27/10/2022
Collection Date Time : 27/10/2022 14:05:10
Received Date Time : 28/10/2022 14:35:12
Reg. Print Date Time : 28/10/2022 16:42:19

Test Name	Value	Unit	Biological Ref Interval
HEMATOLOGY			
HBA1C	7.6	%	

EXPECTED VALUES :-
Metabolically healthy patients = 4.8 - 6.2 % HbA1C
Good Control = 5.5 - 6.8 % HbA1C
Fair Control = 6.8 - 7.5 % HbA1C
Poor Control = > 7.5 % HbA1C

REMARKS :-
In vitro quantitative determination of HbA1C in whole blood is utilized in long term monitoring of glycaemia. The HbA1C level correlates with the mean glucose concentration prevailing in the course patient's recent history (approx. - 6-8 weeks) and therefore provides much more reliable information for glycaemia monitoring than do determination of blood glucose or urinary glucose.
It is recommended that determination of HbA1C be performed at intervals of 4-6 weeks during Diabetes Mellitus therapy.
Results of HbA1C should be assessed in conjunction with the patient's medical history, clinical examination and other findings.

End of Report

DR. SANJEEV
MD PATH
CONSULTANT PATHOLOGIST
Reported By : MGR
Checked By : MGR

HBA1C After-

NOVUS
NRI Lab

Patient ID : 102211783
Name : ██████████
Age/Gender : Male/54 Yrs
Ref. By Doctor : Dr.Chanchal
Address :
Date : 1/2/2023
Collection Date Time : 1/2/2023 13:02:30
Received Date Time : 2/2/2023 14:20:12
Reg. Print Date Time : 2/2/2023 14:35:19

Test Name	Value	Unit	Biological Ref Interval
HEMATOLOGY			
HBA1C	6.8	%	

EXPECTED VALUES :-
Metabolically healthy patients = 4.8 - 6.2 % HbA1C
Good Control = 5.5 - 6.8 % HbA1C
Fair Control = 6.8 - 7.5 % HbA1C
Poor Control = > 7.5 % HbA1C

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Blood Sugar Level Before-

After-



Tests	Results	Biological Reference Range	Units
GLUCOSE FASTING, PLASMA	148.8	High 74.0 - 100.0	mg/dL
GLUCOSE FASTING			
METHOD: SPECTROPHOTOMETRIC, GOD-MOD			
Specimen:			
FASTING PLASMA FL.			
POST PRANDIAL	218	High 80.0 - 140.0	mg/dL

Tests	Results	Biological Reference Range	Units
GLUCOSE FASTING, PLASMA	110.4	High 74.0 - 100.0	mg/dL
GLUCOSE FASTING			
METHOD: SPECTROPHOTOMETRIC, GOD-MOD			
Specimen:			
FASTING PLASMA FL.			
POST PRANDIAL	150	High 80.0 - 140.0	mg/dL

DISCUSSION

Prameha has been described as *Anushangi* by *Acharya Charaka* which means a disease that runs for a prolonged course and remains attached forever. In *Brihat trayi prameha* is included under *Ashtamahagada* which shows dreadfulness of disease. Diabetes mellitus is a long term metabolic disorder with multiple etiological factors, variable clinical manifestations, progression and number of complications. *Madhumeha* is a *Tridoshasaja vyadhi*. Basic pathology behind it is *Avritta vata* and *Bahudrava Shlesma*. *Madhumeha* comes under *Vataja Prameha*. In Ayurvedic texts there is indication of *Amalaki*, *Haridra*, *Vijayasara*, *Gurmara*, *Methika*, *Bilva patra*.

Haridra is mentioned as *Pramehanashak* in *Charak Samhita*, its *Rasa* is *Tikta*, *Virya* is *Ushna* and *Vipak* is *Katu* and according to *Vagbhatta Haridra* is *Tridosha shamaka*. *Haridra* powder is very effective with *Amalaki* and is known to contain terpenoids, cucuminoids, glycosides and flavonoids. Maximal inhibition of the enzyme human pancreatic Amylase (HPA) was obtained with curcuma longa isopropanol extract and it causes reduction in starch hydrolysis which lowered glucose levels. In classical text *Amalaki* is said as *Pramehghna*.

The chemical constituents of *Vijayasara* phenolics, marsupin, pterosupin and pterostilbene have been identified as the blood sugar lowering and antihyperlipidemic components.

Gurmara has gymnemic acids that has been reported to be an effective anti-diabetic agent in lowering blood sugar level in both type 1 and type 2 diabetes.

The main chemical components of *methika* has been shown to regulate blood sugar levels and increase good cholesterol while lowering total cholesterol.

Bilva patra powder could be be strongly recommended in the daily diet of NIDDM subjects for effective management of diabetes.

CONCLUSION

In this case study it shows that *Amalaki Churna*, *Haridra*, *Vijayasara*, *Gurmara*, *Methika*, *Bilva patra Churna* along with following the rules of *pathya* and *apathya* has great role to mitigate diabetes mellitus (type 2) in both subjective and objective parameters.



REFERENCES

1. Monika Sharma, Pankaj Sharma, A single case study on Madhumeha w.s.r. to Diabetes Mellitus (Type II). *J Ayu Int Med Sci.* 2022;7(11): 195-200
2. Julee Meena, Pramod Kumar Mishra, Indu Sharma, Brahmanand Sharma, Pooja Rani. Diabetes Mellitus- An Ayurvedic Perspective. *AYUSHDHARA*, 2023;10 (Suppl 4): 18-23.
3. Nidhi Aggarwal and Shishu, A Review of recent Investigations on Medicinal Herbs Possessing Anti- Diabetic properties, *J Nutrition Disorder Ther* 2011, 1:1
4. Aarti Sankhla, Shashi Sharma and Nidhi Sharma, Hypoglycemic effect of Bael patra (Aegle Marmelos) in NIDDM patients, *www.arcc journals.com, J.Dairying, Foods & H.S.*