



**A SINGLE CASE STUDY ON TYPE 2 DIABETES MELLITUS IN
TERMS OF MADHUMEHA**

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ABSTRACT

Diabetes Mellitus (DM) is a multisystem disorder associated with complications, and the prevalence of which is increasing globally. The incidences of the both types of diabetes are significantly raised over the past two decades, from an estimated 30 million cases in 1985 to 382 million in 2013. Based on this trend, the International Diabetes Federation Projects that 592 million individuals will have diabetes by the year 2035. This is because of globally changed life style of the people. Now a day's people are having total sedentary life, having a lot of junk foods and weight gaining these are the main factors which are responsible for causing diabetes. It can be correlated with *Madhumeha* in Ayurveda. This *Madhumeha* results from various *Nidana*. A 64 years old male patient admitted on Male KC ward of National Institute of Ayurveda, Jaipur, Rajasthan on 12 march 2019 with a complain of generalised weakness, weight loss, increase frequency of urination and numbness of both palms and feet for 2 years. Examination, investigations and history leads to diabetes mellitus. *Basti Karma* is one of the most powerful therapy of all the main five procedures of *Panchkarma* and is said to be equal to half of all the treatments. *Panchatikta Basti* is one among the *Prasritik Yogika Basti* described in the *Siddhi Sthana* of *Charaka Samhita* which is specifically indicated for the treatment of *Prameha*, so patient was treated with *Panchatikta Pancha Prasritik Basti* along with oral medicine. It shows the effective results in the management of *Madhumeha*.

Keywords: Diabetes Mellitus, *Madhumeha*, *Panchatikta Pancha Prasritik Basti*

INTRODUCTION: Diabetes Mellitus (DM) is a clinical syndrome characterised by hyperglycaemia due to absolute or relative deficiency of insulin ^[1]. It is characterized by polyuria, polydipsia, polyphagia, rapid weight loss, fatigue etc. It is one of the lifestyle disorders whose prevalence is rising more rapidly in middle and low income countries. It is a major cause of kidney failure, heart attacks, stroke and lower limb amputation. Allopathic systems have developed medicines to control and treat diabetes but are unable to provide complete relief and

cause a various side effects. Prevalence of Diabetes Mellitus has been significantly raised over the past two decades, from an estimated 30 million cases in 1985 to 382 million in 2013. Based on this trend, the International Diabetes Federation Projects that 592 million individuals will have diabetes by the year 2035. The countries with the greatest number of individual with diabetes in 2013 are China (98.4 million), India (65.1 million), United States (24.4 million), Brazil (11.9 million), and the Russian Federation (10.9 million). Even though both type 1 and type 2 DM

are common, the prevalence of type 2 DM is rising much more rapidly^[2].

Ayurveda through its armamentarium can become a potential source of hypoglycaemic drugs that may be relatively safe, significantly potent and can improve quality of life. Besides drugs, Ayurveda also prefers and prescribes *Shodhana* (purification procedures) and *Pathya-Apathya* (compatible diet and lifestyle), in the management of diseases. Based on similarities in signs and symptoms type 2 DM can be compared with *Madhumeha* in Ayurveda. *Madhumeha* is considered as one of the *Ashtamaha Gadas* in ayurveda. As *Madhumeha* is classified under the *Vatika* type of *Prameha*. *Prameha* is a condition in which patient passes excess and turbid urine^[3]. It is a *Tridoshaja* condition with dominance of *Kapha* and *Dushya* involved in it are *Meda*, *Mamsa*, *Kleda*, *Shukra*, *Shonita*, *Vasa*, *Majja*, *Lasika*, *Rasa* and *Oja* which are all *Kapha Vargiya*^[4]= Except *Asthi Dhatus* all the *Dhatu* are affected by both etiopathological mechanisms of *Avarana* and *Dhatukshya*. The prodromal features of *Prameha* are excess *Mala* in tooth, palate and tongue, burning sensation of

hands and feet, oiliness in the body, excess thirst, and sweet sensation in mouth^[5]. If *Prameha* are untreated then it results into *Madhumeha*^[6]. The main symptoms of the disease are of *Prabhootha Mutrata*, *Avila Mutrata*, *Karapada Daha*, *Kshudaathi Pravrthi* etc.

Case Report: A 64 years old male patient admitted on male KC ward of National Institute of Ayurveda, Jaipur Rajasthan on 12 march 2019 with a complain of Generalised weakness, Weight loss, Increase frequency of urination and Numbness of both palms and feet since 2 years. There is no history of dryness of mouth, bowel disturbances, chest pain, joint pain, unhealed ulcer etc. He was diagnosed as type 2 DM four years back and he had taken some herbal medicine without consult to doctor before coming to our hospital but not get satisfactory result. Apart from this he didn't suffer from other medical problems like HTN, PTB, Asthma, Thyroid disorder etc. Patient was farmer by occupation. He belongs to joint family and there is no any history of similar illness in his family members.

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Table 1: General Examination

General Condition	Good
Height	5.8inch
Wight	58Kg
Skin	Normal
Hair	Normal
Pulse	80/min, Regular
BP	110/70 mm of Hg
Temp	98.7 F
Respiration rate	16/min
Tongue	Coated
Pallor/Icterus/Cyanosis/Clubbing/Edema /Lymphadenopathy	Absent

Table 2: Systemic Examination

CNS	Well oriented to time place and person, conscious.
CVS	S1 S2 Normal
RS	B/L symmetrical, Normal Vesicular Breathing heard, No added sounds heard.

P/A	Umbilicus centrally placed, soft, non-tenderness, no organomegaly
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Table 3: Asthtavidha Pariksha

<i>Nadi</i>	80/min, Regular
<i>Mutra</i>	8-10 times a day and 3-4 times at night, Pale Yellow in colour and odourless
<i>Mala</i>	Once/day and with <i>Niram Mala</i> symptoms
<i>Jihwa</i>	<i>Malavrit</i> (Coated).
<i>Shabda</i>	<i>Gambhira</i> (Kaphaj Prakriti)
<i>Sparsha</i>	<i>Anushana Sheeta</i>
<i>Drik</i>	<i>Prakrit</i> (Normal)
<i>Akriti</i>	<i>Madhayama</i>

Table 4: Dashvidha Pariksha

<i>Prakriti</i>	<i>Vata-Kaphaja</i>
<i>Vikriti</i>	<i>Dosha Dushya Nimitta</i> (mainly <i>Vata dosha</i> and <i>Meda Dhatu</i>)
<i>Saara</i>	<i>Madhyama</i>
<i>Samhanana</i>	<i>Avara</i>
<i>Satmaya</i>	<i>Madhyama</i>
<i>Satva</i>	<i>Madhyama</i>
<i>Pramana</i>	<i>Madhyama</i>
<i>Ahara Shakti</i>	<i>Abhyaharana Shakti</i> :- <i>Pravar</i> <i>Jarana Shakti</i> :- <i>Madhyama</i>
<i>Vyayama</i>	<i>Madhyama</i>
<i>Vaya</i>	<i>Vridhavasta</i>

Investigations (Before Treatment)

FBS -163.7mg/dl, PPBS -258.1mg/dl and other routine investigation such as CBC, ESR, LFT, RFT and Urine routine and microscopic were in normal range.

As per Ayurveda text the symptoms of *Madhumeha* are *Prabhootha Mutrata*, *Avila Mutrata*, *Karapada Daha*, *Karapada Suptata*, *Daurbalya*, *Kshudaati Pravrti* etc.

Diagnosis: *Madhumeha* (Type 2 Diabetes mellitus)

MATERIAL AND METHOD:

TREATMENT PLAN

1. *Panchatikta Pancha Prasritik Basti*
:-

Panchatikta Pancha Prasritik Basti is specifically indicated for the treatment of *Prameha*, hence this *Basti* was selected for the treatment of *Madhumeha*. It is prepared by adding four *Prashriti* ($4 \times 80 = 320\text{ml}$) decoction of *Patol*, *Nimba*,

Bhunimba, *Rasna* and *Saptaparna* and one *prashriti* (80ml) *Go-ghrita* with *Sarshapa Beej* *Kalka* 40gm, Honey 10ml and *Saindhava Lavana* (Rock Salt) 5gm. Firstly honey and rock salt were mixed together followed by addition of warm *ghee* and thoroughly triturated then grinded paste of *Sasharpa Beej* was added and lastly lukewarm decoction was added to it. Again the mixture was triturated thoroughly and filtered through sieve. The obtained filtrate solution was used as *Basti Dravya*.

Total amount 400- 450 ml *Panchatikta Pancha Prasritik Basti* was kept on *Bastiputaka* (Enema bag) and administered through anus in left lateral position with extending his left leg and folding the right knee. *Basti* was given in empty stomach in alternate day for 30 days and *Basti Pratyagaman Kala* was noted.

Table 5:- Oral drugs

Date	Medicine	Dose	Duration
12-03-2019	Ashwagandha Churna Shatavari Churna	2gm 2gm	30 Days

	Chopchini Churna	2gm	
12-03-2019	Ojasvini Churna	5gm	30 Days
12-03-2019	Kutki Churna	5gm	30 Days

Diet Pathya (Do's):-

- Fruits: - Guava, Lime, Apple
- Vegetables: - Coriander leaves, Cabbage, Carrot, Cauliflower, Curry leaves, Drum stick leaves, Bitter gourd.
- Oils: - Sunflower oil, Castor oil
- Pulses: - Green gram, Bengal gram, Horse gram, Lentil, Red gram.

Apopathy(Don'ts):-

- Fruits:- Mango, Cherry, Grape, Orange, Strawberry, Pear

- vegetables :-Potato, Spinach, Pumpkin, Ladies finger, Brinjal
- Oils :- Ground nut oil
- Pulses:- Black gram

RESULT : *Panchatikta Pancha Prasritik Basti* along with oral medicine and diet control shows significant reduction in blood glucose levels along with complete relief from *Karapada suptata* (Numbness of both palms and feet) and marked relief from *Daurbalya* (Weakness) and *Prabhuta Mutrata* (Polyuria). (Table 6 and 7)

Assessment in Present Case

Table 6: Subjective (Sign and Symptoms)

S.N	Criteria	Before treatment on 14/03/2019	Review After 2 weeks 26/3/2019	Review after 4 weeks 9/4/2019
1.	<i>Daurbalya</i> (Weakness)	Present	Present	Absent
2.	<i>Karapada suptata</i> (Numbness of both palms and feet)	Moderate	Mild	Absent
5.	<i>Prabhuta mutrata</i> (Polyuria)	8-10 times a day and 3-4 times at night	6-8 times a day and 2-3 times at night	3-6 times a day and 1-2 times at night.

Table 7: Objective parameters

Investigation	Before treatment on 14/03/2019	Review After 2 weeks 26/3/2019	Review after 4 weeks 9/4/2019
FBS	163.7mg/dl	151.0mg/dl	129.1mg/dl
PPBS	258.1mg/dl	221.5mg/dl	177.6mg/dl

DISCUSSION: Diabetes Mellitus is consider as a one the life style disorder in this modern era. Consumption of incompatible foods, junk foods and having the sedentary life style and lack of exercise which leads to obesity and then this leads to the indirect cause for the metabolic disorder like diabetes mellitus.

Madhumeha known as silent killer needs to be treated as early as possible to stop onset of complication. *Madhumeha* is a *Tridoshas* predominant *Vyadhi* but *Avrutta Vata* and *Bahudrava Shlesma* is the main

ailments. *Madhumeha* is a subtype of *Vataja Prameha*. *Panchatikta Basti* is one among the *Prasritik Yogika Basti* described in the *Siddhi Sthana* of *Charaka Samhita*. *Panchatikta Pancha Prasritik Basti* is specifically indicated for the treatment of *Prameha*, hence this *Basti* was selected for the present study and administered to treat the *Madhumeha* and other oral drugs *Ashwagandha Churna*, *Shatavari Churna* and *Ojasvini churna* are administered as a *Rasayana* (Rejuvenation). *Panchatikta Pancha*

Prasritik Basti contain a decoction of *Patol*, *Nimba*, *Bhunimba*, *Rasna* and *Saptaparna* mainly these drugs has *tikta* and *kashaya rasa* which possesses the *Kaphahara*, *Meda*, *Kleda Apashoshana* properties.

Madhumeha is a *dhatvagnimandhyajanita vyadhi*. Almost all the drugs having *Deepana* and *Pachana Gunas*, *Katu* and *Tikta rasa* and *Usna Vriya* encounters *Dhatvagnimandya* and increase the *Dhatvagni* and help in *Ama-Pachana* thereby alleviates *Ama*. Which helps to form the *Dhatu* in proper proportion with proper qualities and it ensures *Sarvadhatuposhana* and pacifies *Dourbalya*. *Basti* does the *Malashodhana Karma* so it eliminates the metabolic wastes, vitiated *Pitta Dosha* along with *Kapha Dosha* and thus removes *Avarana* of *Vata* there by normalizing the digestive power which helps to control the symptoms. Many clinical and experimental studies depicts that *Nimba*, *Bhunimba*, *Patola* reduces blood sugar significantly. In *Madhumeha* the predominant vitiated *Dosha* are *Vata* and *Kapha* and the ingredients of *Panchatikta Pancha Prasritik Basti* has mainly *Tikta Rasa* with *Usna Vriya* which nullify the *Vata* and *Kapha*. They also acts as *Deepana*, *Pachana* and *Vedanasthapana* so it directly act on the main factor in the pathology of *madhumeha*.

CONCLUSION : In this case study we got good result of *Panchatikta Pancha Prasritik Basti* along with *Ayurveda* oral medicine in the treatment of *madhumeha* in both subjective and objective parameter.

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Source of support: Nil Conflict of interest: None Declared

Cite this Article as : [Joshi Ram Kishor et al: A Single Case Study on Type 2 Diabetes Mellitus in Terms of Madhumeha] www.ijaar.in : IJAAR VOLUME IV ISSUE V NOV - DEC 2019 Page No: 496-501

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BIOCHEMISTRY		BIOCHEMISTRY		BIOCHEMISTRY		BIOCHEMISTRY	
Test Done	Observed Value	Units	Reference Range	Test Done	Observed Value	Units	Reference Range
POST PRANDIAL BLOOD SUGAR				FASTING BLOOD SUGAR			
PP Blood Sugar - Plasma	258.1	mg. / dl.	70 to 140	Fasting Blood Sugar - Plasma	163.7	mg. / dl.	60 to 110
Glucose oxidase-peroxidase				Glucose oxidase-peroxidase			
Note : Test performed on fully automated biochemistry analyzer							
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DR. PRIYANKA SHARMA (MD PATHOLOGIST)		DR. PRIYANKA SHARMA (MD PATHOLOGIST)		DR. PRIYANKA SHARMA (MD PATHOLOGIST)		DR. PRIYANKA SHARMA (MD PATHOLOGIST)	
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BIOCHEMISTRY		BIOCHEMISTRY		BIOCHEMISTRY		BIOCHEMISTRY	
Test Done	Observed Value	Units	Reference Range	Test Done	Observed Value	Units	Reference Range
FASTING BLOOD SUGAR				POST PRANDIAL BLOOD SUGAR			
Fasting Blood Sugar - Plasma	151.0	mg. / dl.	70 to 110	PP Blood Sugar - Plasma	221.5	mg. / dl.	70 to 140
Glucose oxidase-peroxidase				Glucose oxidase-peroxidase			
Note : Test performed on fully automated biochemistry analyzer							
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Test Done	Observed Value	Units	Reference Range	Test Done	Observed Value	Units	Reference Range
FASTING BLOOD SUGAR				POST PRANDIAL BLOOD SUGAR			
Fastin Blood Sugar - Plasma	125.1	mg. / dl.	70 to 110	PP Blood Sugar - Plasma	177.6	mg. / dl.	70 to 140
Glucose oxidase-peroxidase				Glucose oxidase-peroxidase			
Note : Test performed on fully automated biochemistry analyzer							
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