

ROLE OF SHILAJIT IN THE MANAGEMENT OF MADHUMEHA w.s.r. to DIABETES MELLITUS

Trivedi Atal Bihari¹, Mahajan Nitin², Mahajan Nikhil³, Gupta Poonam⁴.

¹Prof, HOD, PG Dept, of Kayachikitsa, ²Asst. Prof, ³Lecturer, ⁴P.G.Scholar, JIAR, Jammu, India

ABSTRACT

Ayurveda, the science of life if followed and practiced appropriately keeps an individual hale and healthy. The *Madhumeha* is equated with the Diabetes Mellitus due to similarity in etiology, pathology, symptoms and prognosis but different in the treatment. In the present study we planned to get effective and safe treatment for “*Madhumeha*” with the help of clinical principles of Ayurveda. In the present study, 30 patients having *Madhumeha* were selected from O.P.D. & I.P.D. of Jammu Institute of Ayurveda & Research College and Hospital, Jammu. These patients were subjected to the following therapeutic regimen namely Shilajit. Then assessment of therapy on signs and symptoms was done by adopting suitable scoring methods and repeating laboratory investigations and critically analyzed. The results thus obtained finally were subjected for statistical analysis for the therapy. The end results thus obtained were interpreted and graded as complete remission, marked improvement, moderate improvement and mild improvement and presented in details.

Keywords: *Madhumeha*, *Shilajit*, Ayurveda.

INTRODUCTION

Awareness about 'Health' and approach of community towards *Ayurveda*, in quest of 'Healthy Life' is increasing. Its holistic approach, it's natural and mostly safe methods, its potential for taking care of global health needs, are getting recognized globally. It has placed a new challenge in front of *Ayurvedic* society. The challenge of medical practice today is to identify individuals who are at risk of developing disease, determine the severity of disease and distinguish the responders

from the non- responders (individualized -medicine).

Madhumeha, which is known to world as Diabetes, is a global health problem and receiving much attention now-a-days. *Sanskrit Literature* from the times of '*Vedas*' constitutes the description of *Madhumeha*. Ancient *Ayurveda* physicians like *Charaka*, *Sushruta*, and *Vagbhata* were well versed with many of the nuances of this disease. *Ayurvedic classics* contain ample literature about *Madhumeha* and its treatment. *Madhumeha* is a metabolic disorder

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and is diagnosed mainly with the

help of signs and symptoms related to 'Mutra' (Urine). Injudicious intake of food, sedentary life style, stress, genetic predisposition is some of the important etiological factors of *Madhumeha*¹.

Epidemiological figures indicative of prevalence of disease worldwide are growing day by day and major share of India is quite alarming. According to data presented by WHO, more than 220 million people worldwide suffer from Diabetes. Although prevalence of both Type-1 & Type-2 Diabetes is increasing worldwide, the prevalence of Type2 Diabetes is spreading more rapidly in developing countries because of increasing obesity, reduced activity levels & western style diet². In 2010, 45.2 million people in India were diabetic. By the end of 2016, this number will increase to 50.6 million. This is likely to be 71.4 million in 2030 which will be 115th of the total Diabetic population at that time. India has long passed the stage of epidemic & the number has given the country the dubious distinction of *DIABETES CAPITAL OF THE WORLD*.

Global access of Diabetes is increasing. Various Oral hypoglycemic agents, Insulin formulations, life style modification plans consisting dietary management and exercise, are some of the important efforts towards the management of Diabetes. In spite of these, world is seeking for a safer and effective remedy. Increased side effects, lack of effective treatment for complications, high cost of new drugs and resistance to the drugs are some reasons for renewed public interest in *Ayurvedic* medi-

cines. So, now it's a duty of an *Ayurvedist* to try to understand the disease and complications according to *Ayurveda* and to establish our time tested drugs as a prime therapy. Taking into account the hazardous nature of Diabetes and to establish efficacy of *Ayurvedic* compounds, present study entitled- "**Role of Shilajit in the Management of Madhumeha w.s.r.to Diabetes Mellitus**" was undertaken. In *Ayurveda* it is said that there is not any curable disease that can't be cured with Shilajit. Shilajit has *Rasayana* properties, in *Madhumeha* body acquires *shaithilya* & Shilajit is able to improve quality of body tissues. That is why Shilajit was selected for this study³.

MATERIALS AND METHOD

Selection of patients: For the present study, 30 patients with classical signs and symptoms of *Madhumeha* and patients who had blood glucose level more than normal limits were selected from OPD and I.P.D of Jammu Institute of *Ayurveda* and Research, Hospital.

Criteria for Diagnosis/ inclusion:

1. Patients were diagnosed on the basis of classical signs and symptoms of disease *Madhumeha* as per *Ayurvedic* texts.
2. After diagnosis diabetes specific biochemical investigations were carried out. Patients with F.B.S. level more than 126mg/dl and P.P.B.S. level more than 200mg/dl were selected for study.
3. A detail proforma was filled consisting Signs and Symptoms, Complete history of disease, Family history, *Dashavidha pariksha* and *Ashtavidha*

pariksha was filled for every patient in favour to support the diagnosis of disease.

4. In addition to this, following laboratory investigations were carried out Urine-Routine and Microscopic. Blood – Hb%, TLC, DLC, ESR.

• **Exclusion Criteria:**

1. Patients with Type 1 DM.
2. Patients with Type 2 DM who were insulin dependent.
3. Patients above age of 65 yrs.
4. Patients with severe diabetic complications like cardiovascular diseases, nephropathy, and retinopathy.
5. Diabetes due to endocrinopathies e.g. Pheochromocytoma, Acromegaly, Cushing's syndrome, Hyperthyroidism etc.

1. Pregnancy i.e. gestational Diabetes mellitus.

1) **Prabhuta Mutrata⁵ [Polyuria]:**

Grade	Frequency
0	3-5
1	6-9
2	10-12
3	>12

2) **Avilmutrata⁶-**

Grade	Turbidity
0	Clear urine.
1	slight turbidity
2	Turbidity clearly presents but news print can be read.
3	News print cannot be read (more turbid).

3) **Trishnadhikya⁷ {Polydipsia}:**

Grade	Frequency
0	Normal
1	Mild increased but tolerated
2	Moderate increased but tolerated
3	Severely increased but can't Tolerated

• **Therapeutic regimen:** Patients were randomly selected. All patients were given Shilajit. In those patients who were taking some oral hypoglycemic agents, their blood sugar at that time was considered as a basal level and the patients were advised to take hypoglycemic drug in the same dose. Effect of study drug was observed in relation to the basal records of symptoms and sugar levels.

• **Diet and Exercise:** Patients were advised to take diet which is indicated for Madhumeha. Patients were encouraged for regular, suitable exercise and advised to avoid 'Apathya' viharas⁴.

• **Criteria for Assessment:** Effect of the treatment was assessed by assessing- Signs and symptoms before and after treatment. FBS, PPBS levels before and after treatment.

4) Kshudhadhikya⁸ {Polyphagia} :

Grade	Frequency
0	Normal
1	Mild increased but tolerated
2	Moderate increased but tolerated
3	Severely increased but can't tolerated

5) Kara-pada-tala-daha⁹ (Burning sensation in hand & feet) :

Grade	Daha
0	No Daha
1	Occasionally noticed
2	Very often and regular activity not hampered
3	Whole day and regular activity hampered

6) Daurbalya¹⁰ (General debility):

Grade	Daurbalya
0	Can do routine work I exercise
1	Can do moderate exercise with hesitancy
2	Can do mild exercise only, with difficulty
3	Can't do mild exercise either

BIOCHEMICAL PARAMETERS:

1. Blood Sugar Level: Blood sugar level [BSL]-FBS:125mg/dl and PPBS-200mg/dl– were considered as base line. Improvement in blood sugar level of each patient was calculated by below mentioned formula-

Improvement in FBS (%) = $\frac{\text{Total BT} - \text{Total AT}}{\text{Total BT} - 125} \times 100$

Improvement in PPBS (%) = $\frac{\text{Total BT} - \text{Total AT}}{\text{Total BT} - 200} \times 100$

Results obtained from individual patient were categorized according to following gradation pattern-

Grad	Assessment	Criteria
0	No Improvement	Improvement in BSL < 25% or no change in
1	Mild Improvement	BSL 25% (up to 50%)
2	Moderate Improvement	BSL 50% (up to 75%)
3	Marked Improvement	Improvement in BSL 75%
4	Control	Blood sugar level within normal

RESULTS AND DISCUSSION

EFFICACY OF TREATMENT

- **Signs and Symptoms of Madhumeha.**

Table 1: Effect on Prabhut Mutrata.

	Mean Score		%Relief	S.D.(±)	S.E(±)	t	p
	B.T.	A.T.					
N=26	2.42	0.5	79.33	1.05	0.19	9.7	<0.001

The table shows that mean initial score for Prabhuta mutrata was 2.42, which reduced to 0.5, showing 79.33% improvement. Statistical analysis shows that the improvement was highly significant at P < 0.001.

Table 2: Effect on Avila Mutrata

	Mean Score		%Relief	S.D. (±)	S.E. (±)	t	p
	B.T.	A.T.					
N=4	0.21	0.21	0	0	0	-	-

Effect of therapy on Avila mutrata shows no improvement with unchanged mean (0.21).

Table 3: Effect on Kshudhadhikya

	Mean Score		%Relief	S.D. (±)	S.E. (±)	t	p
	B.T.	A.T.					
N=20	1.71	0.67	60.23	0.88	0.16	6.22	<0.001

The mean score for Kshudhadhikya was 1.71 in the beginning, which reduced to 0.67 at the end of treatment, showing 60.23% improvement. Statistical analysis shows that the improvement was highly significant giving 't' value 6.22.

Table 4: Effect on Trishnadhikya:

	Mean Score		%Relief	S.D. (±)	S.E. (±)	t	p
	B.T.	A.T.					
N=26	2.17	1.07	50.69	0.83	0.15	7.04	<0.001

Effect on Trishnadhikya reveals that B.T. mean score was 2.17 which reduced to 1.07 with 50.69% relief, giving 't' value of 7.04 which is highly significant at P < 0.001.

Table 5: Effect on Kara-pada-tala-daha:

	Mean Score		%Relief	S.D. (±)	S.E. (±)	t	p
	B.T.	A.T.					
N=14	0.71	0.54	33.7	0.47	0.08	1.98	>0.05

Effect on Kara-pada-tala-daha by this therapy was 33.7%. The initial mean score was 0.71 which decreased to 0.54 after treatment giving 't' value of 1.98 which is insignificant at P > 0.05.

Table 6: Effect on Daurbalya:

	Mean Score		%Relief	S.D. (±)	S.E. (±)	t	p
	B.T.	A.T.					
N=27	2.1	0.64	69.5	0.57	0.10	13.14	<0.001

Mean scores for Daurbalya before and after treatment were 2.1 and 0.64 respectively. It showed 69.5% relief with 't' value 13.14 which is highly significant at P < 0.001.

• **Blood sugar levels:**

Table 7: Effect on F.B.S.

	Mean Score	%Relief	S.D. (±)	S.E (±)	t	p
N=28	20.67	54.15	9.6	1.8	11.2	<0.001

Mean score of improvement in F.B.S. calculated by formula, was 20.67 which shows 54.15% relief giving 't' value of 11.2 which is highly significant ($P < 0.001$).

Table 8: Effect on P.P.B.S.

	Mean Score	% Relief	S.D.	S.E.	t	p
N=28	14.92	37.2	8.5	1.6	9.28	<0.001

Mean score of improvement in P.P.B.S., calculated by formula, was 14.92 which shows 37.2% relief giving 't' value of 9.28 which is highly significant ($P < 0.001$).

OVERALL EFFECT OF THERAPY:

Table 9: Improvement In Signs and Symptoms

RESULTS	Patients	%
Controlled	1	3.57
Marked Improvement	3	10.7
Moderate Improvement	13	46.4
Improvement	11	39.28
Unchanged	0	0.00

1 patient (3.57%) assessed as controlled and 3 patients (10.7%) as Markedly Improved. Moderate improvement was seen in 13 patients (46.4%) whereas Mild improvement was observed in 11 patients (39.28%). All patients responded to treatment to some extent and no patient assessed as unchanged.

Table 10: Improvement In Blood Sugar Level

RESULTS	F.B.S.		P.P.B.S.	
	Patients	%	Patients	%
Controlled	7	25	3	10.7
Marked Improvement	6	21.4	3	10.7
Moderate Improvement	8	28.6	7	25.0
Improvement	1	3.6	8	28.5
Unchanged	5	17.85	7	25.0

CONCLUSION

Secrets of healthy life are minutely described in Ayurveda. Dinacharya, Ritucharya, Annapanavidhi are some of these secrets¹¹.

Though it is true that modernization of life style is responsible for the increasing prevalence of Madhumeha in community, Madhumeha is known to Acharyas since long and they were the

masters as far as the diagnosis and treatment of Madhumeha is concerned. Diabetes mellitus, a metabolic disease described by Allopathic medical science, can be simulated with Madhumeha.

Data presented by WHO is quite indicative of increasing prevalence of DM (Madhumeha) in the community. This is an effort to find out an effective remedy for Madhumeha (DM), present study entitled. **‘Role of Shilajit in the Management of Madhumeha w.s.r. to Diabetes Mellitus’** was undertaken. Study was persuaded in the direction of following Aims and Objectives-

1. To study etiopathogenesis and symptomatology of Madhumeha and Diabetes mellitus simultaneously.
2. To assess the efficacy of Shilajit on signs and symptoms of Madhumeha [DM].
3. To assess the role of Shilajiti on diabetes specific biochemical

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