



ISSN 2456-3110

Vol 9 · Issue 11

November 2024

Journal of  
**Ayurveda and Integrated  
Medical Sciences**

*www.jaims.in*

**JAIMS**

An International Journal for Researches in Ayurveda and Allied Sciences



**Maharshi Charaka**  
Ayurveda

**Indexed**

## An Etiopathological Study and Therapeutic Intervention of *Haridradi Yog* (A Hypothetical Ayurvedic Formulation) on Covid - 19 Recovered Patients of *Madhumeha* w.s.r. to Type 2 Diabetes Mellitus

Sunita Kumari<sup>1</sup>, Man Mohan Sharma<sup>2</sup>

<sup>1</sup>Post Graduate Scholar, PG Dept. of Rog Nidan Evum Vikriti Vigyan, Madan Mohan Malviya Govt. Ayurved College, Udaipur, Rajasthan, India.

<sup>2</sup>Professor & HOD, PG Dept. of Rog Nidan Evum Vikriti Vigyan, Madan Mohan Malviya Govt. Ayurved College, Udaipur, Rajasthan, India.

### ABSTRACT

**Purpose:** The *Madhumeha* (DM) are vulnerable to many bacterial & viral infections, They are more prone to be infected with the COVID-19. And after contracting with the COVID-19 they have experienced more aggravation in their symptoms like in pneumonitis etc. Many research studies have revealed that COVID-19 had the very bad effect on *Madhumeha* patients. It is typically observed in both the first wave and the second wave of COVID-19. The diabetic patient who contracted COVID-19 had the highest mortality rate. Among the 66 COVID-19 patients hospitalised, there were 44 non-diabetic cases and 22 cases of diabetes. *Madhumeha* is compared and correlated with Diabetes mellitus. **Method:** In this clinical study, 30 clinically diagnosed patients were administered Indigenous Formulation 5gm twice a day in empty stomach for 60 day with Luke warm water. **Result:** The result was statistically Very significant in *Prabhut Mutrata, Durbulaya, FBS, PPBS*. While statistically significant in *Pipasa Adhikya, Kshudha Adhikya, Kar-Pad-Tala Daha & Supti*, Urine Specific Gravity. Conclusion: From the observation & result it can be concluded that Indigenous Formulation can be used effectively in the management of Diabetes Mellitus Type -2 (COVID -19 recovered patients).

**Key words:** Diabetes Mellitus Type -2, COVID -19, Indigenous Formulation.

### INTRODUCTION

India has been using *Ayurveda* as a form of traditional medicine for centuries. The science of long life teaches people how to live a healthy lifestyle and prevents illness in addition to curing existing illnesses.

*Madhumeha* is considered by *Ayurveda* to be a typical cellular and tissue-level metabolic disease. This condition may be related to *Dhatvagnimandya* in *Ayurveda*. The current study is a humble attempt to

treat *Prameha* patients according to classical principles. Among endocrine diseases, Diabetes mellitus (DM) is one of the most prominent. It is a condition that affects the way carbohydrates, fats, and proteins are metabolized and is caused by an absolute or relative lack of insulin secretion together with variable degrees of insulin resistance.

#### Definition of *Madhumeha*

सर्व एव प्रमेहा मूत्रादिमाधुर्ये मधुगन्ध सामान्यात् पारिभाषिकीं मधुमेहाख्यां लभन्ते ॥ (सु.चि.12/6)

It is a medical ailment termed *Madhumeha* in which the patient excretes urine that resembles *Madhu*, such as having a taste similar to *Kashaya* and *Madhura*, a colour similar to honey and body that becomes sweetness.

The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the virus that causes the contagious sickness known as coronavirus disease 2019 (COVID-19). In Wuhan, China, in December 2019, authorities discovered the first recorded case. The illness soon

#### Address for correspondence:

Dr. Sunita Kumari

Post Graduate Scholar, PG Dept. of Rog Nidan Evum Vikriti Vigyan, Madan Mohan Malviya Govt. Ayurved College, Udaipur, Rajasthan, India.

E-mail: sunitaindoria19@gmail.com

Submission Date: 13/10/2024 Accepted Date: 21/11/2024

#### Access this article online

##### Quick Response Code



Website: [www.jaims.in](http://www.jaims.in)

DOI: [10.21760/jaims.9.11.12](https://doi.org/10.21760/jaims.9.11.12)

spread throughout the world, causing the COVID-19 pandemic.

The *Madhumeha* (DM) are vulnerable to many bacterial & viral infections, they are more prone to be infected with the COVID-19. And after contracting with the COVID-19 they have experienced more aggravation in their symptoms like in pneumonitis etc. Many research studies have revealed that COVID-19 had the very bad effect on *Madhumeha* patients.

It was also observed in many research studies after the COVID-19 pandemic that there were more mortality rate in the patients of COVID-19 with the comorbidity of *Madhumeha* (DM).

## AIM AND OBJECTIVES

A therapeutic study to evaluate the efficacy of *Haridradi Yog* in management of *Madhumeha* (Diabetes mellitus) patients, who recovered from COVID-19.

## MATERIALS AND METHODS

### Selection of cases

The study was conducted on 30 clinically diagnosed & confirmed cases of form OPD & IPD of associated group of hospital of M.M.M. Govt. Ayurved College, Udaipur irrespective of their age, sex, religion, occupation etc. Detailed history was taken and a special research pro-forma was prepared for the study incorporating all the relevant points from both *Ayurvedic* and Modern views.

### Inclusion Criteria

1. The Patients of either sex in the Age group of 25 To 70 Years.
2. The Patients Having Clinical Sign and Symptoms of *Madhumeha*/Diabetes Mellitus.
3. Diabetic patients who recovered from the COVID-19 Infection.
4. Both Obese and non-Obese patients.

### Exclusion criteria

1. Patients below 25 years and above 70 years of age.

2. Emergency cases in DM.
3. Patients having IDDM (Type 1).
4. Chronic complications (Microvascular and Macrovascular).
5. Patients who have not been infected with Covid-19.
6. with Juvenile Diabetes.

### Selection of trial drug

*Haridradi Yog* (Hypothetical *Ayurvedic* Formulation)

**Table 1: Show Ingredients of *Haridradi Yog***

SN	Sanskrit Name	Botanical Name	Useful Part	Quantity
1.	<i>Haridra</i>	<i>Curcuma longa</i>	Root (rhizome)	1 part
2.	<i>Haritaki</i>	<i>Terminalia chubula</i>	Fruit	1 Part
3.	<i>Amalaki</i>	<i>Emblica officinalis</i>	Fruit	1 Part
4.	<i>Bibhitaki</i>	<i>Terminalia Billerica</i>	Fruit	1 Part
5.	<i>Bilwa</i>	<i>Aegle marmelos</i>	Leaf	1 Part
6.	<i>Maithi</i>	<i>Trigonella Foenumgraecum</i>	Seed	1 Part
7.	<i>Jamun</i>	<i>Syzygium cumini</i>	Seed	1 Part
8.	<i>Dalchini</i>	<i>Cinnamomum zeylanicum</i>	Bark	¼ Part
9.	<i>Neem</i>	<i>Azadirachta indica</i>	Seed	¼ Part

### Administration of Drug

Form: *Churna*

Dose: 5-5 gm with lukewarm water

Mode of administration: Oral

Time of administration: Before lunch and meal

Duration: 60 days

### Study Design

Study type - Interventional.

Study design - A Single Arm, open labelled randomized clinical trial.

### Follow-Up Study

Patient were followed up for 30 days to access the variation in symptomatology after completion of the therapy. Follow up progress and other effects were noted down.

### Criteria for Assessment

#### Subjective assessment

Diagnosis was made on the basis of sign and symptoms of *Madhumeha* (Diabetes mellitus type- 2 *Prabhoot Mutrata* (Polyuria), *Pipasa* (Polydypsia), *Bahuasheet* (Polyphagia), *Kara-Pada-Tala Daha* (Burning sensation of hand and feet), *Supti* (numbness), *Mutra Madhurya* (Glycosuria), *Avil Mutrata* (Turbidity of urine).

#### Objective assessment

- FBS
- PPBS
- Urine Test (Glucose, Albumin, Specific gravity, Urine colour) at an interval of 30 days.

These investigations were done in all the patients before treatment and after completion of treatment.

For assessment of improvement in Clinical Manifestations following Symptom Rating Scale were used:

**Table 2**

Symptoms	Score
Absent	0
Mild	1
Moderate	2
Severe	3

### OBSERVATIONS AND RESULTS

Maximum no. of the patients i.e. 46.7% of the patients were from the age group of 61-70 years, 53.3% of the patients were male patients, 83.3% of the patients

were married, maximum no. of the patients were from the Hindu religion (90%), maximum no. of the patients i.e. 60% of the patients were from the weight group of 71-90 Kg, 70% of the patients were having the sitting type of work, 33.3% of the patients were house wives, maximum number of the patients (73.3%) of the patients were from the middle class, maximum number of the patients (80%) were vegetarian, the maximum number of the patients (36.7%) were doing light and irregular *Vyayama*, 40% of the patients were having *Prabhut Nindra*, 50 % of the patients were having no family history, 43.3% of the patients were having *Vata- Pittaja Nadi*, 76.7% of the patients were having *Samanya Gandha* (normal smell), 56.7% of the patients were having *Malavrata* (coated) *Jivha*, majority of the patients 56.7% were having *Vata-Kapha Prakriti*.

#### Aaharja Nidana

In this study, 93.3% of the patients were having *Sheeta Dravya Sevana*, 90% of the patients were having *Payanshi Sevana*, 86.6% of the patients were having *Guru Ahara Sevana*, 83.3% of the patients were having *Guda Vikara Atisevana*, 80% of the patients were having *Madhura - Dravya Sevana*, 73.3% of the patients were having *Snigdha Dravya Sevana*, 70% of the patients were having *Atidadhi Sevana*, 63.3% of the patients were having *Mutravardhaka Dravya*, 50% of the patients were having *Navanna-Pana- Sevana*, 43.3% of the patients were having *Ati-Amala-Lavana Ras* and 23.3% of the patients were having *Gramyamamsaati Sevana*.

#### Viharaja & Mansik Nidan

In this study 80% of the patients were having *Asya - Sukham*, 76.7% of the patients were having *Krodha*, 73.3% of the patients were having *Avyayam & Shoka*, 66.7% of the patients were having *Diwaswapana*, 53.3% of the patients were having *Swapanasukham* and 43.3% of the patients were having *Ratrijagran*.

#### Impact of COVID - 19 on Madhumehi Patients

It was observed that 23.3% of the patients reported no effect of COVID-19 on their disease condition. While, the same proportion 23.3% reported weakness after

suffering from COVID-19. Proportion of patients reporting shortness of breath was 20.0%, 10.0% reported joint pain, 6.7% reported sleeplessness, 6.6%

reported Chest pain, 3.3% of the patients reported smell loss, joint pain & sleeplessness after COVID – 19.

### The results of the therapeutic trial:

**Table 3: Showing Effect of therapeutic trial on clinical symptomatology in 30 patients of Madhumeha (DM Type-2)**

<i>Prabhut Mutrata</i>	Mean	SD	Median	First quartile	Third Quartile	% change	Z-value	p-value
Before Treatment	1.93	0.521	2.00	2.00	2.00	49.7%	4.874	<0.001 (*)
After Treatment	0.97	0.490	1.00	1.00	1.00			Very Significant
<b><i>Pipasa Adhikya</i></b>								
Before Treatment	1.16	0.746	1.00	1.00	2.00	25.8%	3.000	0.001 (*)
After Treatment	0.86	0.507	1.00	1.00	1.00			Statistically Significant
<b><i>Kshudha Adhikya</i></b>								
Before Treatment	1.63	0.889	2.00	2.00	2.00	26.3%	3.127	0.002 (*)
After Treatment	1.20	0.805	1.00	1.00	2.00			Statistically Significant
<b><i>Karpad Tala Daha</i></b>								
Before Treatment	0.73	0.521	1.00	0.00	1.00	45.2%	3.162	0.002 (*)
After Treatment	0.40	0.498	0.00	0.00	1.00			Statistically Significant
<b><i>Supti</i></b>								
Before Treatment	0.77	0.626	1.00	0.00	1.00	35.1%	2.828	0.005 (*)
After Treatment	0.50	0.572	0.00	0.00	1.00			Statistically Significant
<b><i>Mutramadhuryata</i></b>								
Before Treatment	0.47	.681	0.00	0.00	1.00	57.4%	2.828	0.005 (*)
After Treatment	0.20	.407	0.00	0.00	0.00			Statistically Significant
<b><i>Avila Mutrata</i></b>								
Before Treatment	.60	.770	0.00	0.00	1.00	61.6%	3.317	0.001(*)

After Treatment	.23	.430	0.00	0.00	0.25			Statistically Significant
<b>Alasya/Utsahani</b>								
Before Treatment	0.93	0.583	1.00	1.00	1.00	67.7%	4.146	<0.001 (*)
After Treatment	0.30	0.466	0.00	0.00	1.00			Very Significant
<b>Daurbalya</b>								
Before Treatment	2.37	0.765	3.00	2.00	3.00	34.1%	4.347	<0.001 (*)
After Treatment	1.56	0.504	2.00	1.00	2.00			Very Significant
<b>Pindiko-Udveshantan</b>								
Before Treatment	.23	.504	0.00	0.00	0.00	13.1%	1.000	0.317
After Treatment	.20	.484	0.00	0.00	0.00			Statistically No Significant
Compared using Wilcoxon sign rank test								
(*) denotes p-value is significant at 5% level of significance								

**Table 4: Showing effect of therapeutic trial on lab parameters in 30 patients of Madhumeha (DM-Type 2)**

Fasting Blood Sugar (mg/dl)	Mean	Std. Deviation	% change	t-value	p-value
Before Treatment	162.80	42.644	15.8%	11.258	<0.001 (*)
After Treatment	137.03	38.955	Very Significant		
<b>Post Prandial Blood Sugar</b>					
Before Treatment	223.47	74.888	15.3%	7.498	<0.001 (*)
After Treatment	189.20	64.028	Very Significant		
<b>Urine Specific Gravity</b>					
Before Treatment	1.016	0.0103	0.19%	3.391	0.002 (*)

After Treatment	1.014	0.0097	statistically Significant
Compared using paired sample t-test			
(*) denotes p-value is significant at 5% level of significance			

## DISCUSSION

### Probable modes of action of Indigenous Formulation

Although *Prameha* is a *Tridoshaja Vyadhi*, the *Acharyas* focused primarily on the vitiation of the *Kapha Dosha*, *Medovridhi*, and *Medodhatwagnimandhya*. Therefore, in *Madhumeha* patients, formulations that work at the level of *Dhatwagni* and oppose *Kapha Dosha* and *Medodhatu* are given in an effort to break down the *Samprapti*.

Most of the drugs in *Haridradi Yog* have *Pramehara* properties that affect *Madhumeha's* etiopathogenesis directly. It is possible that the qualities of *Tikta-Katu-Kashaya Rasa*, *Laghu-Ruksha Guna*, *Ushna Virya*, *Katu Vipaka*, and *Deepan Paachan* corrected *Kapha Dushti* and eliminated *Medodhatwagnimandhya*, which corrected *Medo Dhatu Dushti*.



Additionally, they respond to *Bahudrava Sleshma* and *Kleda*, which are examples of *Dosha Vishesha*. *Pitta* vitiation may have been remedied by *Tikta Rasa* and *Sheeta Virya Dravyas*. *Tridosha Shamaka* drugs also alleviates *Vata Dushti*, resulting in regular functioning of *Doshas* and *Dhatu*s. Alleviation of *Kapha-Pitta* removes obstruction from the path of *Vata*. As a result, *Samprapti Vighatan* takes place, the symptoms of *Madhumeha* are reduced.

According to modern pharmacology active principle of *Haritaki*, *Vibhitaki*, and *Amalaki* i.e., chebulinic acid which has reported alpa glucosidase inhibitory action, *Vibhitaki* also contains gallic acid which helps in regeneration of beta cells of pancreas, *Amalaki* stimulates pancreatic secretion, and restores and regenerates beta cell architecture, *Haridra* contains curcuminoids, have been shown to improve insulin resistance, decrease glucose and insulin levels, Fenugreek seeds also hypoglycemic in nature, *Bilva Patra* contain polyphenols and flavonoids, which can aid in the reduction of blood glucose level, Jamboline and jambosine, two active components found in the *Jambu* seeds, prevent the rate at which sugar is released into the blood and raise levels of the hormone insulin in the body, By simulating the actions of insulin and speeding up the absorption of sugar into cells, cinnamon may help decrease blood sugar and fight diabetes.

## CONCLUSION

*Prameha (Madhumeha)* is a *Tridoshajanya Vyadhi* with a predominance of *Kapha* vitiation and metabolic disturbance at both the *Jatharagni* and *Dhatvagni* levels. The major *Dushyas* of *Prameha*, *Meda*, *Mamsa*, and *Kleda* have been compared to type 2 diabetes' abnormal fat, protein, carbohydrate, and electrolyte metabolism. The alarming increase in the prevalence of diabetes mellitus is caused by an excessively sedentary lifestyle, overeating, and overindulgence in fatty foods.

The primary impacts of the excessive *Nidana* of *Prameha*, specifically *Aasyasukha*, *Swapnasukha*, *Avyayama*, and *Guru Snigdha Ahara*, are the vitiation of *Kapha* and *Meda*. *Madhumeha* should therefore be treated with medications that have *Agnideepana*, *Amapachana*, *Kaphamedohara*, and *Anulomaniya* characteristics. The absence of any harmful effects is a benefit for patients that is noticed in cases of *Ayurvedic* therapy, and it is especially important given the widespread adoption of *Ayurveda*.

## REFERENCES

1. Charaka Samhita, Vidhyotini Vyakhaya, By Shir Satyanarayana Shastri, Published by Chaukhamba Bharti Academy Varanasi 2015.
2. Shusruta Samhita edited by Kaviraj Ambikadatta Shastri, Chaukhamba Sanskrit Sansthan, Varanasi, reprinted 2011.
3. Ashtanga Sangraha vidyotini edited by Kaviraj Atridev Gupta Chaukhambha Prakashana, Varanasi, 2009.
4. Ashtanga Hridaya vidyotini edited by Kaviraj Atridev Gupta Chaukhambha Prakashana, Varanasi, 2009.
5. The Bhavprakash nighantu with elaborated Hindi commentary by Padmashri prof. K.C. Chuneekar, edited by Dr. G.S. Pandey, Chaukhambha Bharti Akadami, Varanasi, 2010.
6. Dravyaguna Vijanana Vol. II, Prof. P. V. Sharma, Chaukhambha Bharati Academy, Varanasi.

**How to cite this article:** Sunita Kumari, Man Mohan Sharma. An Etiopathological Study and Therapeutic Intervention of Haridradi Yog (A Hypothetical Ayurvedic Formulation) on Covid - 19 Recovered Patients of Madhumeha w.s.r. to Type 2 Diabetes Mellitus. J Ayurveda Integr Med Sci 2024;11:81-86. <http://dx.doi.org/10.21760/jaims.9.11.12>

**Source of Support:** Nil, **Conflict of Interest:** None declared.