

**ROLE OF NYAGRODHADI CHURNA IN THE MANAGEMENT OF  
MADHUMEHA W.S.R TO TYPE 2 DIABETES MELLITUS****Vipul Bartwal<sup>\*1</sup>, Om Prakash Singh<sup>2</sup> and Sanjay Kumar Tripathi<sup>3</sup>**

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**ABSTRACT**

Lifestyle represents people's way of life, showing the full spectrum of events, daily attitudes from sunrise to sunset. Dramatic changes in peoples' lives, mostly due to sedentary lifestyles that can contribute to many disorders including *Madhumeha*. As we all know, *Madhumeha* is a disease in which aetiology, signs and symptoms coincide with current Diabetes mellitus ideas. **Aims of Study**-The present study was carried out with an objective to compare the efficacy of *Nyagrodhadi Churna* in the management of *Madhumeha* w.s.r. to type 2 Diabetes Mellitus. **Materials and Methods**- The present study was randomised clinical study, single blind conducted on 20 patients of either sex having symptoms of *Madhumeha*. These patients were subjective with *Nyagrodhadi churna* 2 times in a day. **Result**- Overall response was

excellent improvement in 20%, marked improvement in 25% moderate improvement 30% and mild improvement in 15% of patients. **Conclusion**- The *Nyagrodhadi Churna* has a significant effect on both subjective and objective parameters. No adverse drug effects were observed at the end of study.

**KEYWORDS:** *Madhumeha*, Diabetes Mellitus, *Nyagrodhadi churna*.

## INTRODUCTION

*Ayurveda* is an ancient science of life which is based on eternal principles of life. The whole clinical approach of *ayurved* is based on preventive, promotive & curative aspects. Indian medicine is one of the oldest medical faculties on this planet. Our *Rishis* and *Maharashis* have made a great contribution to the provision of social and personal health in accordance with the materials and methods available in ancient times. According to *Ayurveda Madhumeha* (diabetes mellitus) is one of the 20 sub types of *prameha* and is predominantly a vata disease. It is believed that it is mainly due to *medo dusti*.<sup>[1]</sup> The *medodusti* vitiate *mansa*, *rakta*, *kleda* and *ojas*. All the *dhatu*s, *malas* and all three *doshas* are involved in the disease procedure and are described as one of the eight major diseases (*Asthamahagada*).<sup>[2]</sup>

Diabetes mellitus (DM) refers to a group of common metabolic disorders that share the phenotype of hyperglycemia. Several distinct types of Diabetes Mellitus are caused by a complex interaction of genetics and environmental factors. Depending on the etiology of the Diabetes Mellitus, factors contributing to hyperglycemia include reduced insulin secretion, decreased glucose production. The worldwide prevalence of Diabetes Mellitus has risen dramatically over the past two decades, from an estimated 30 million cases in 1985 to 382 million in 2013. Based on current trends, the International Diabetes Federation projects that 592 million individuals will have diabetes by the year 2035. Although the prevalence of both type 1 and type 2 Diabetes Mellitus is increasing worldwide, the prevalence of type 1 and type 2 Diabetes Mellitus is rising much more rapidly, presumably because of increasing obesity, reduced activity levels as countries become more industrialized, and the aging of the population.<sup>[3]</sup>

*Ayurveda* has described that it is not rational treatment when the medicine modifies one disease, on the other hand it provokes new complaints. So effort has been made here to search for a safe and effective medicine, without any side effects. *Nyagrodhadi churna* is a classical yoga which is described in *Chakradatta* in *Prameha roghadhikar*.<sup>[4]</sup> Contains of *Nyagrodhadi churna* are *Nyagrodha*, *Udumber*, *Aswatha*, *Amaltas*, *Asana*, *Amra*, *Jambu*, *Arjuna*, *Dhava*, *Paribhadra*, *Meshshringi*, *Chitraka*, *Amalki*, *Haritki*, *Kutaja*, *Bhallataka* and others *Pramehaghna* drugs. Many other drugs are having *Kaphahara*, *Pittahara*, and *Medohara* and Anti-Diabetic properties hence helpful in the *Samprapti vighatana* of the disease.

**Aims and objectives-** To evaluate the efficacy of *Nyagrodhadi Churna* in the management of *Madhumeha*.

## MATERIALS AND METHODS

**Study design-** Randomized sampling, single blind.

**Source of data-** 20 Patients of Madhumeha will be selected for study from O.P.D. / I.P.D. unit of P.G department of Kayachikitsa, Uttarakhand Ayurveda University Rishikul Campus, Haridwar.

**Sample size-** 20

**Duration of study-** 60 days

**Slection of drug-** *Nyagrodhadi churna*.

**Dose-** 5gram, twice a day with Triphala Kawth 30 minute before meal.

## Ingredients

**Table 1: Showing the ingredients of nyagrodhadi churna.**

<i>Drug</i>	<i>Part</i>	<i>Part Used</i>	<i>Drug</i>	<i>Part</i>	<i>Part Used</i>
1. <i>Nyagodh</i>	1	<i>Twaka</i>	14. <i>Yasthimadhu</i>	1	<i>Twaka</i>
2. <i>Udumbara</i>	1	<i>Twaka</i>	15. <i>Lodhra</i>	1	<i>Twaka</i>
3. <i>Ashwath</i>	1	<i>Twaka</i>	16. <i>Varuna</i>	1	<i>Twaka</i>
4. <i>Shyonaka</i>	1	<i>Twaka</i>	17. <i>Paribhadra</i>	1	<i>Twaka</i>
5. <i>Aragvadha</i>	1	<i>Twaka</i>	18. <i>Patola</i>	1	<i>Patra</i>
6. <i>Asana</i>	1	<i>Twaka</i>	19. <i>Meshasringi</i>	1	<i>Patra</i>
7. <i>Amra</i>	1	<i>Twaka</i>	20. <i>Danti</i>	1	<i>Mula</i>
8. <i>Jambu</i>	1	<i>Twaka</i>	21. <i>Citraka</i>	1	<i>Mula</i>
9. <i>Kapittha</i>	1	<i>Twaka</i>	22. <i>Adhaki</i>	1	<i>Patra</i>
10. <i>Priyala</i>	1	<i>Twaka</i>	23. <i>Karanja</i>	1	<i>Beeja</i>
11. <i>Arjuna</i>	1	<i>Twaka</i>	24. <i>Triphala</i>	1	<i>Phala</i>
12. <i>Dhava</i>	1	<i>Twaka</i>	25. <i>Kutaj</i>	1	<i>Beeja</i>
13. <i>Madhuka</i>	1	<i>Twaka</i>	26. <i>Bhallataka</i>	1	<i>Phala</i>

## Inclusion criteria

- Fasting blood glucose level > 110 mg/dl- 250 mg/dl.
- Post Prandial blood sugar level > 140 mg/dl- 350 mg/dl.
- Patients between the age group of 20-60 years irrespective of gender.
- Patients of either sex will be

## Exclusion criteria

- Patients of Type 1 Diabetes mellitus.
- Blood sugar --fasting Blood sugar level>250mg/dl.

- Post Prandial blood sugar level >350mg/dl.
- Patients having complication of diabetes.
- Age below 20 years & above 60 years.
- Any other serious medical & surgical ill patient will be excluded.
- Patients with poorly controlled diabetes even after insulin therapy.
- Patient cannot follow the dietary regime.

**Criteria for withdrawl**

- Personal matters
- Aggravation of complaints
- Inter current illness
- Any other difficulties
- Leave against medical advice

**Subjective criteria**

- *Prabhuta mutrata*
- *Avila mutrata*
- *Atishudha*
- *Pipasaadhikya*
- *Kara-padha daha*
- *Shithila-angata*
- *Daurbalaya*
- *Krishta*

**Objective criteria**

- Blood sugar fasting
- Blood sugar post-prandial
- Body weight
- B.M.I
- HbA1c

**Investigations**

- Hb%, TLC, DLC, ESR,
- Serum Cholestrol,

- SGPT
- B.Urea, Serum Creatinine
- Urine(Routine and Microscopic

### Statistical analysis

Wilcoxon signed rank test was applied on subjective parameters. Paired t test was applied on the both objectives and biochemical parameters.

Thus, the obtained results were interpreted as;

$p > 0.05$ - Not significant

$p < 0.01$  and  $< 0.05$ - significant

$p < 0.001$ - Highly significant

### OBSERVATIONS

**Table 1.1: Shows status of 20 patients of *Madhumeha*.**

Drug	Total registered	Lama	completed
<i>Nyagrodhadi Churna</i>	20	2	18

**Table 1.2: Shows the effect of *nyagrodhadi churna* in subjective parametres.**

Group A	Median		Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT				
<i>Prabhutamutrata</i>	2	0	-3.839 <sup>a</sup>	0.000	71.79	Significant
<i>Avila mutrata</i>	2	0	-4.058 <sup>a</sup>	0.000	97.73	Significant
<i>Atishudha</i>	1	0	-4.000 <sup>a</sup>	0.000	100.00	Significant
<i>Pipasaadhikya</i>	1	0	-3.606 <sup>a</sup>	0.000	92.86	Significant
<i>Kar-padhadaha</i>	1.5	0	-1.739 <sup>a</sup>	0.096	32.00	NS
<i>Shithila-angata</i>	3	0	-4.064 <sup>a</sup>	0.000	86.54	Significant
<i>Daurbalaya</i>	2	0	-4.005 <sup>a</sup>	0.000	80.49	Significant
<i>Krishta</i>	2	1	-1.403 <sup>a</sup>	0.161	18.18	NS

**Table 1.3: Shows the effect of *Nyagrodhadi churna* in objective parametres.**

Parameter		N	Mean	SD	SE	% of improvement	t	P VALUE	RESULT
Blood sugar fasting	BT	18	227.00	22.36	5.00	7.93	14.775	0.000	Sig
	AT	18	209.00	22.47	5.02				
Blood sugar post-prandial	BT	18	285.05	32.37	7.24	24.36	206.577	0.000	Sig
	AT	18	215.60	32.27	7.22				
Body weight	BT	18	71.57	6.66	1.49	1.01	1.701	0.128	NS
	AT	18	70.85	6.68	1.49				
B.M.I	BT	18	24.16	2.11	0.47	0.66	1.168	0.251	NS
	AT	18	24.00	2.12	0.47				
HbA1c	BT	18	7.33	0.46	0.10	1.32	1.341	0.142	NS
	AT	18	7.23	0.46	0.10				

**Table 1.3: Shows the effect of nyagrodhadi churna in Biochemical parametres.**

Group A		Mean	N	SD	SE	t-Value	P-Value	% Change	Result
Hb%	BT	12.22	18	1.19	0.27	-19.067	0.000	8.72	Sig
	AT	13.29	18	1.19	0.27				
TLC	BT	7937.50	18	108.67	24.30	28.774	0.000	8.06	Sig
	AT	7297.50	18	173.57	38.81				
Neutrophils	BT	39.70	18	2.98	0.67	12.352	0.000	6.17	Sig
	AT	37.25	18	2.71	0.61				
Lymphocytes	BT	54.55	18	2.33	0.52	9.747	0.000	2.75	Sig
	AT	53.05	18	2.16	0.48				
Monocytes	BT	5.55	18	0.51	0.11	4.819	0.000	9.91	Sig
	AT	5.00	18	0.00	0.00				
Eosinophils	BT	3.25	18	0.64	0.14	13.077	0.000	27.69	Sig
	AT	2.35	18	0.49	0.11				
Basophils	BT	0.15	18	0.37	0.08	1.831	0.028	100.00	Sig
	AT	0.00	18	0.00	0.00				
ESR	BT	13.05	18	2.04	0.46	34.871	0.000	24.52	Sig
	AT	9.85	18	1.93	0.43				
Serum Cholestrol	BT	196.38	18	23.66	5.29	5.897	0.000	8.35	NS
	AT	179.98	18	21.30	4.76				
SGPT	BT	19.03	18	0.91	0.20	-14.107	0.000	5.09	Sig
	AT	19.99	18	0.87	0.19				
Blood urea	BT	22.69	18	2.93	0.65	-28.587	0.000	3.92	Sig
	AT	23.58	18	2.97	0.66				
Serum cretinine	BT	0.61	18	0.35	0.08	0.287	0.778	2.36	NS
	AT	0.60	18	0.27	0.06				
HbA1c	BT	7.33	18	0.46	0.10	1.341	0.142	1.32	NS
	AT	7.23	18	0.46	0.10				

## RESULT

Statistically significant result was obtained in subjective parameters i.e *Prabhuta mutrata*, *Avila mutrata*, *Atishudha*, *Pipasaadhikya*, *Shithila-angata* and *Daurbalaya* while non significant result found in *kara-padha daha* and *Krishta*. Statistically significant result also obtained in objective parameters i.e blood sugar fasting and post parandial sugar levels and B.M.I, Body Weight and HbA1c were non-significant.

## DISCUSSION

In this present study excellent improvement in 20%, marked improvement in 25% moderate improvement 30% and mild improvement in 15% of patients.

**Probable mode of action of *Nyagrodhadi churna***

Most of the dravya have *Kapha-Vatahara*, *Kapha-Pittahara*, *Vata-Pittasamaka* and *Tridoshsamaka* properties.<sup>[5]</sup> Along with this, it contains the *Tikta Rasa*, *Sheeta Virya* and *Madhura Vipaka* which might have corrected the vitiation of *Pitta* in this way, acting on *Kapha-Pitta* and also on *Kaphavargiya Dushyas*. Thus the provision of significant relief in the *Madhumeha* disease.

**CONCLUSION**

*Madhumeha* is a *Tridoshaja*(*kapha-vata pardhan vyaadhi*) which has the clinical features similar to Diabetes mellitus. *Nyagrodhadi Churna* had a significant result in symptoms of *Madhumeha*. No adverse drugs effects were observed at the end of study, thus it can be concluded that *Madhumeha* patients can be effectively managed by *Ayurveda*.

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