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A Comparative Study Of *Medoghna Rasayana Vati* & *Shilajitwadi Vati* In The Management Of *Madhumeha* W.S.R. To Diabetes Mellitus.

Dr. G. Vinay Mohan[1], Dr. P. Shrinivas Rao[2], Khaire Ajit patilbuva[3]

1- Principal and H.O.D-Department of Kayachikitsa, Shri Shivyogeshwar Rural Ayurvedic Medical College and Hospital,Inchal.

2- Professor-Department of Kayachikitsa, Shri Shivyogeshwar Rural Ayurvedic Medical College and Hospital,Inchal.

3- P.G.Scholar,Kayachikitsa Department,Shri Shivyogeshwar Rural Ayurvedic Medical College and Hospital,Inchal.

ABSTRACT: Besides the miraculous achievement of modern medical science, humanity is passing through a horror of disease and drug phobia, particularly in developing countries like India, where poverty and illiteracy account for the man's ignorance towards the principles of health care. In modern medical science symptomatology of *Madhumeha* is equivalent to the features of Diabetes mellitus. Among the several health problems Diabetes mellitus is a giant disease considered as one of the arch enemies of the mankind. Diabetes and its complications pose a major threat to future public health resources throughout the world. The *Ayurvedic* management of Diabetes aims not only to achieve a strict glycemic control but also to treat the root cause of the disease. For its various modalities of treatment are developed which depends upon the underline pathology. *Madhumeha* has been classified under the *Vatika* type of *Prameha*. The *Vata* may be provoked either directly by its etiological factors, *Avarana* by *Kapha* and *Pitta* to its path or by continuous depletion of *Dhatus*. *Vagbhata* has classified the *Madhumeha* into two categories viz. *Dhatukshayajanya Madhumeha* and *Avaranajanya Madhumeha*. The factors which provoke the *Vata* directly causes *Apatarpanajanya Madhumeha* while the factors which provoke *Kapha* and *Pitta* causes *Santarpanajanya Madhumeha*. The *Apatarpanajanya Madhumeha* patients are usually Asthene and are equivalent to Type I Diabetes mellitus, while the *Santarpanajanya Madhumeha* patients are Obese equivalent to Type II Diabetes mellitus. In *Avaranajanya Madhumeha*, *Kapha* is the predominant *Dosha* while the important *Dushyas* are *Meda* and *Kleda*. Type 2 Diabetes mellitus is mainly associated with *Avaranajanya Samprapti*. In *Madhumeha*, the main *Avaraka* are *Kapha*, *Pitta*, *Rasa*, *Mamsa* and *Meda*, and out of these *Meda* is predominant. Principle of management of *Avarana* is *Sramsana*, *Rasayana* treatment and the use of *Medoghna Dravyas*. Hence the formulations of *Medoghna Rasayana Vati* & *Shilajitwadi Vati* is indicated, especially in treating the *Madhumeha*.

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Corresponding Author : Khaire Ajit patilbuva,P.G.Scholar,Kayachikitsa Department,Shri Shivyogeshwar Rural Ayurvedic Medical College and Hospital,Inchal.Email-drajitk25@gmail.com

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INTRODUCTION:

As per W.H.O diabetes is growing challenge in India with estimated 8.7% diabetic population in age group of 20 and 70 years. The rising prevalence of diabetes and other non -communicable diseases is driven by combination of factors- rapid urbanization, sedentary life style, unhealthy diets, tobacco use, and increasing life expectancy. Obesity and overweight are the most important risk factors responsible for diabetes[1]. In ancient treatise we find a vivid description of the disease solely attributed to metabolic derangement along with genetic predisposition, *Prameha* is one of them. It is described as *Kulaja Vyadhi* ultimately accepted the fact of hereditary nature of the disease[2]. *Prameha* has *Santarpanottha* and *Apatarpanottha Samprapti* as mentioned by *Samhitas*[3]. Evaluation of present scenario and causative factors of type 2 diabetes mellitus, suggest its similarity with the *Santarpanottha Prameha* is an age long disease knows from Vedic period and now is leading lifestyle disorder. According to *Ayurveda* beliefs, factors such as stress, unhealthy diet, weather and strained relationship can all influence the balance that exists between a person's *Doshas*, unbalanced energies in terns leave individuals more susceptible to disease. In ancient treatise we find a vivid description of the disease solely attributed to metabolic derangement along with genetic predisposition. *Prameha* is one of them. *Acharya Sushruta* considered it fewer one among the eight grave diseases[4]. In long term diabetes mellitus widespread pathological changes are going on like vascular lumen narrowing early atherosclerosis. Sclerosis of glomerular capillaries, retinopathy, neuropathy and

peripheral vascular insufficiency. Thus, only management of glycemic condition is not sufficient; there is need of satisfactory therapeutic modalities free from side effects. Currently various anti diabetes mellitus drugs in modern medicine are used to control hyperglycemia and needed to be taken for life time. These medicines may cause side effects like GI disturbance, renal, hepatic impairment etc. Also these anti diabetes mellitus drugs are sometimes not sufficient for proper control of diabetes mellitus. The new trend is turning to be more suggestive to the management with the help of diet, exercise and *Ayurvedic* management. *Ayurveda* emphasizes on the management of *Prameha* with *Pathyakar Ahar*, *Vyayam* and *Nidan Parivarjan Chikitsa* along with various *Kalpas*. These *Kalpas* stated in *Samhita* are *Hetu* and *Vyadhi Viparit* targeting the causative *Doshas* and *Dhatu*. Hence it gives us a hope that the multiple treatment modalities mentioned in *Ayurveda* acts on the basic pathology of the disease and help in better control.

AIMS AND OBJECTIVES

1. To study the etiology and *Samprapti* of disease *Madhumeha* according to *Ayurvedic* texts in the context of disease Diabetes mellitus Type 2.
2. To assess the efficacy of *Medoghna Rasayana* in the management of *Madhumeha* (Diabetes mellitusType 2).
3. To evaluate the efficacy of *Shilajitwadi Vati* in the management of *Madhumeha* (Diabetes mellitus Type 2).
4. To compare the effect of *Medoghna Rasayana Vati* & *Shilajitwadi Vati.*

MATERIALS & METHODS:

Criteria of Diagnosis:

The patients were diagnosed on the basis of Symptoms of *Madhumeha*, and blood sugar level (fasting and post prandial), urine sugar level.

Ethical permission number :- SSRAMC/IECC/2018, Dated-23-3-2018

Inclusive criteria-

1) Patient between ages 30-60 yrs.

2) Patients having *Granthokta lakshanas* of *Madhumeha* will be included in this study.

3) Patients with F.B.S. level more than 126mg/dl and P.P.B.S. level more than 200mg/dl were selected for study.

4) Understanding and begin willing to sign the inform consent form

Exclusive criteria-

1) Patients having any associated major illness like renal failure, Cardiac problem, hypersensitivity reactions to any drug.

2) Diabetes mellitus due to other hormonal disturbances like pheochromocytoma, Acromegaly, Thyrotoxicosis etc.

STUDY GROUPS

Table no 1:- Showing groups of management

	Trial group	**Control group**
Drug	*Medoghna Rasayan Vati*	*Shilajatvadi Vati*
Dose	250 mg	250 mg
Duration	28 days	28 days
Sevan Kala	After meal	After meal
Route	Oral	Oral
Anupana	Lukewarm water	Lukewarm water
No. of patients	20	20
Follow up study	Every week and whenever needed	Every week and whenever needed

CRITERIA FOR ASSESSMENT.

Patients were assessed on the basis of the following criteria:

1) Improvement in signs and symptoms of disease on the basis of the symptoms score.
2) Fasting Blood Sugar. and Postprandial Blood Sugar levels.

Urine Routine the patients were examined weekly and the changes observed in the signs and symptoms were assessed by adopting suitable scoring method and the

objective signs by using appropriate clinical tools. The detail assessment of clinical signs and symptoms are discussed below:

1. *Prabhuta Mutrata* (Polyuria)

Quantity of urine (in liter)

1} 1.50 to 2.00 - 0

2} 2.00 to 2.50 - 1

3} 2.50 to 3.00 - 2

4} 3.00 and onwards - 3

Frequency of urine

1} 3 – 6 times per day, rarely at night – 0

2} 6 – 9 times per day, 0 – 2 times per night – 1

3} 9 – 12 times per day, 2 – 4 times per night – 2

4} More than 12 times per day, more than 4 times per night - 3

2) *Kshudha* (Appetite)

1} Regular usual – 0

2} Slightly increased (1 – 2 meals) – 1

3} Moderately increased (3 – 4 meals) – 2

4} Markedly increased (5 – 6 meals) - 3

3) *Mutramadhurya* (Glycosuria)

1} Absence of Glucose in urine – 0

2} <0.5% Glucose in urine – 1

3} 0.05 - 1.0% of Glucose in urine – 2

4}1.0 – 2.0% of Glucose in urine – 3

5} >2.0% Glucose in urine - 4

4) *Swedadhikya* (Perspiration)

1} Sweating after heavy work and fast movement or in hot weather – 0

2}Profuse sweating after moderate work and movement – 1

3}Sweating after little work and movement (stepping ladder etc.) – 2

4} Profuse sweating after little work and movement – 3

5} Sweating even at rest or in cold weather – 4

5) *Daurbalya* (Weakness)

1} Can do routine exercise/work – 0

2} Can do moderate exercise with hesitancy – 1

3} Can do mild exercise only, with difficulty – 2

4} Cannot do mild exercise too - 3

6) *Alasya/Utsahahani* (General Debility)

1} No Alasya (doing satisfactory work with proper vigor and in time) – 0

2} Doing satisfactory work/late initiation, like to stand in comparison to walk – 1

3} Doing unsatisfactory work/late initiation, like to sit in comparison to stand – 2

4} Doing little work very slow, like to lie down in comparison to sit. – 3

5} Don't want to do work/no initiation, like to sleep in comparison to lie down - 4

7) *Nidradhikya* (Sleep)

1} Normal sleep, 6 – 8 hours/24 hours – 0

2} Sleep up to 8 hours/24 hours with *Angagaurava* – 1

3} Sleep up to 8 hours/24 hours with *Angagaurava and Jrimbha* – 2

4} Sleep up to 10 hours/24 hours with Tandra – 3

5} Sleep up to >10 hours/24 hours with *Tandra & Klama* – 4

OBSERVATION AND RESULTS

Statistical analysis

Statistical results **of (*Medoghnarasayan Vati)*** in Group A and Group B patients in **(*Shilajitwadi Vati)*** before and after treatment. Total 40 patients were registered in this study. Out of that all 40 patients were studied in this project. 20 patients were in group A while 20 were in B group. Each patient was observed thoroughly and noted neatly. The observations are recorded and necessary charts and graphs were made.

RESULTS

Effects of Group-A and B

Table-2-Effect of Group-A and B on *Prabutmutrata* of *Madhumeha.*

Symptom	GROUP A								
	Mean score				%	S.D (±)	S.E (±)	T Value	p value
	Day 0			BT-AT					
PRABUTMUTRATA	2.50	Day 7	1.70	0.80	32.00	0.523	0.120	4.29	<0.05
		Day 14	0.55	1.95	78.00	0.686	0.028	9.52	<0.05
		DAY 28	0.65	1.85	74.00	0.587	0.135	11.67	<0.05
	GROUP B								
	2.50	Day 7	1.70	0.80	32.00	0.410	0.094	4.66	<0.05
		Day 14	1.15	1.35	54.00	0.489	0.022	9.58	<0.05
		DAY 28	0.45	2.05	82.00	0.686	0.157	12.67	<0.05

Effect on *Prabutmutrata*

In this work of 20 patients studied in *Madhumeha* with Group-A ***Prabutmutrata*** revealed are given in detail in Table No.2. Statistical analysis showed that the mean score which was 2.50 before the treatment was reduced to 0.65 after the treatment with 74% improvement and there is a statistically significant. (P<0.05) results are graphically represented in figure no 1. In this work of 20 patients studied in *Madhumeha* with Group-B ***Prabutmutrata*** revealed are given in detail in Table No.2. Statistical analysis showed that the mean score which was 2.50 before the treatment was reduced to 0.45 after the treatment with 82% improvement and there is a statistically significant. (P<0.05) results are graphically represented in figure no 1.

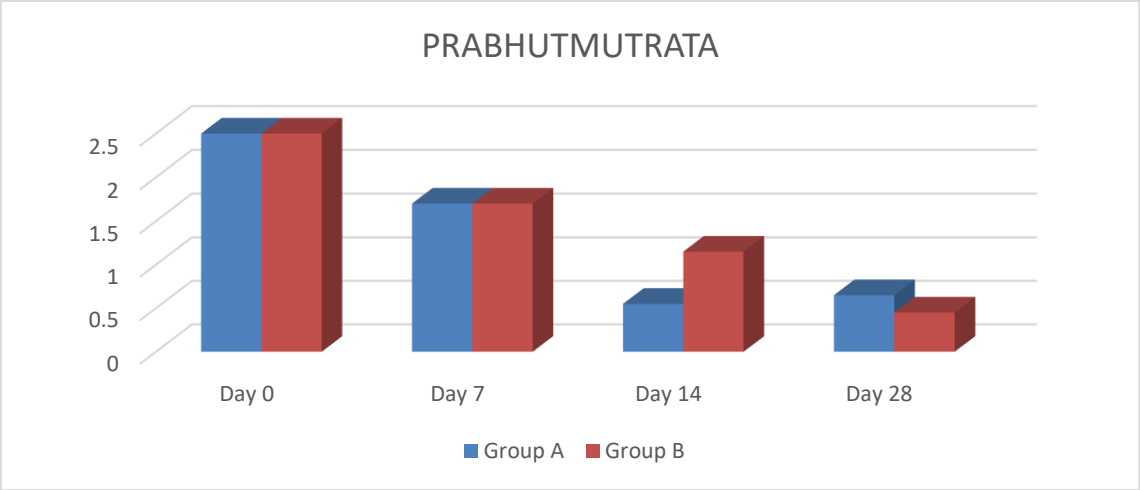


Table-3 Effect of Group-A and B on *Kshudha* of *Madhumeha.*

Symptom	GROUP A								
	Mean score				%	S.D (±)	S.E (±)	T Value	p value
	Day 0			BT-AT					
KSHUDHA	2.80	Day 7	2.15	0.65	23.21	0.489	0.112	4.06	<0.05
		Day 14	1.25	1.55	55.36	0.510	0.026	11.46	<0.05
		DAY 28	0.20	2.60	92.86	0.503	0.115	20.03	<0.05
	GROUP B								
	2.80	Day 7	1.85	0.95	33.93	0.224	0.051	6.65	<0.05
		Day 14	1.20	1.60	57.14	0.503	0.012	12.33	<0.05
		DAY 28	0.75	2.05	73.21	0.510	0.117	12.08	<0.05

Effect on *Kshudha*

In this work of 20 patients studied in *Madhumeha* with Group-A ***Kshudha*** revealed are given in detail in Table No.3. Statistical analysis showed that the mean score which was 2.80 before the treatment was reduced to 0.20 after the treatment with 92.86% improvement and there is a statistically significant. (P<0.05) results are graphically represented in figure no 2:

In this work of 20 patients studied in *Madhumeha* with Group-B ***Kshudha*** revealed are given in detail in Table No.3. Statistical analysis showed that the mean score which was 2.80 before the treatment was reduced to 0.75 after the treatment with 73.21% improvement and there is a statistically significant. (P<0.05) results are graphically represented in figure no 2:

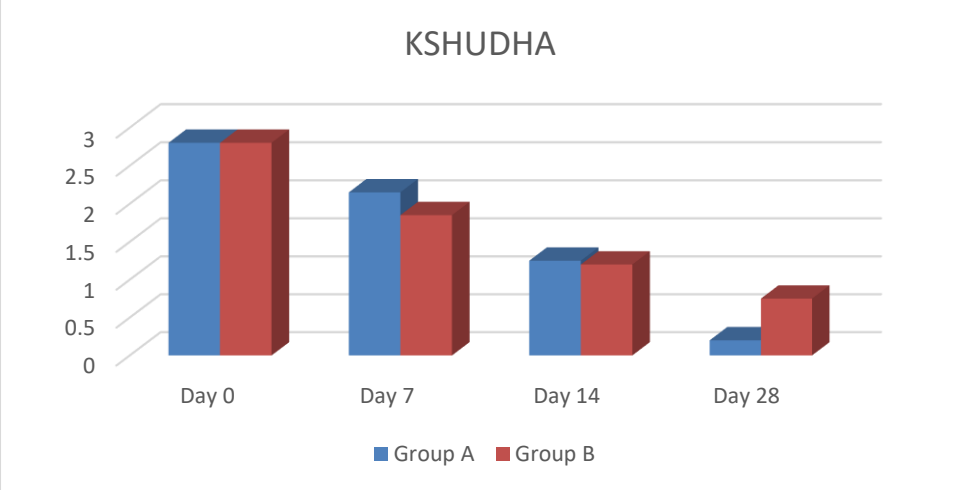


Table-4, Effect of Group-A and B on *Mutramdhurya* of *Madhumeha*

Symptom	GROUP A								
	Mean score				%	S.D (±)	S.E (±)	T Value	p value
	Day 0			BT-AT					
MUTRAMDHURYA	3.25	Day 7	2.85	0.40	12.31	0.503	0.115	3.11	<0.05
		Day 14	1.85	1.40	43.08	0.503	0.026	8.50	<0.05
		DAY 28	0.40	2.85	87.69	0.587	0.135	19.00	<0.05
	GROUP B								
	3.45	Day 7	2.45	1.00	28.99	0.324	0.074	5.65	<0.05
		Day 14	1.40	2.05	59.42	0.394	0.017	12.80	<0.05
		DAY 28	0.85	2.60	75.36	0.598	0.137	14.95	<0.05

Effect on *Mutramdhurya*

In this work of 20 patients studied in *Madhumeha* with Group-A ***Mutramdhurya*** revealed are given in detail in Table No.4. Statistical analysis showed that the mean score which was 3.25 before the treatment was not reduced to 0.40 after the treatment with 87.69% improvement and there is a statistically significant (P<0.05). Results are graphically represented in figure no 3:

In this work of 20 patients studied in *Madhumeha* with Group-B ***Mutramdhurya*** revealed are given in detail in Table No.4. Statistical analysis showed that the mean score which was 3.45 before the treatment was not reduced to 0.85 after the treatment with 75.36% improvement and there is a statistically significant (P<0.05).Results are graphically represented in figure no 3:

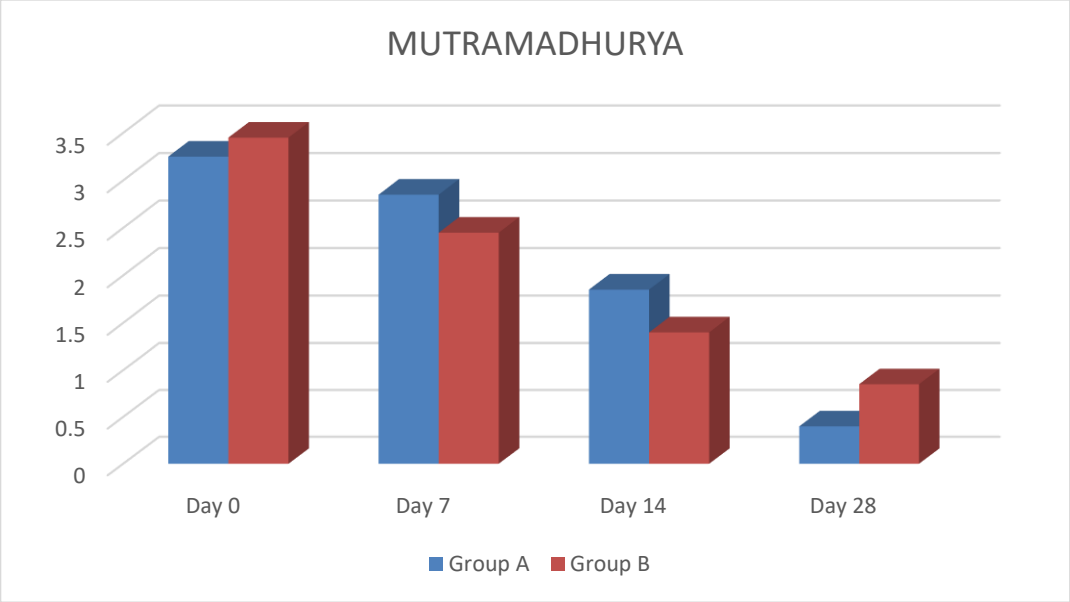


Table-5, Effect of Group-A and B on *Swedadhikya of Madhumeha*

Symptom	GROUP A								
	Mean score				%	S.D (±)	S.E (±)	T Value	p value
	Day 0			BT-AT					
SWEDADHIKYA	3.30	Day 7	2.85	0.45	13.64	0.510	0.117	3.38	<0.05
		Day 14	1.85	1.45	43.94	0.510	0.027	10.88	<0.05
		DAY 28	0.40	2.90	87.88	0.553	0.127	18.84	<0.05
	GROUP B								
	3.35	Day 7	2.35	1.00	29.85	0.000	0.000	6.46	<0.05
		Day 14	1.40	1.95	58.21	0.394	0.000	12.43	<0.05
		DAY 28	1.15	2.20	65.67	0.616	0.141	11.85	<0.05

Effect on *Swedadhikya*.

In this work of 20 patients studied in *Madhumeha* with Group-A ***Swedadhikya*** revealed are given in detail in Table No.5. Statistical analysis showed that the mean score which was 3.30 before the treatment was reduced to 0.40 after the treatment with 87.88% improvement and there is a statistically significant. (P<0.05) results are graphically represented in figure no 4: In this work of 20 patients studied in *Madhumeha* with Group-B **Swedadhikya** revealed are given in detail in Table No.5. Statistical analysis showed that the mean score which was 3.35 before the treatment was reduced to 1.15 after the treatment with 65.67% improvement and there is a statistically significant. (P<0.05) results are graphically represented in figure no 4:

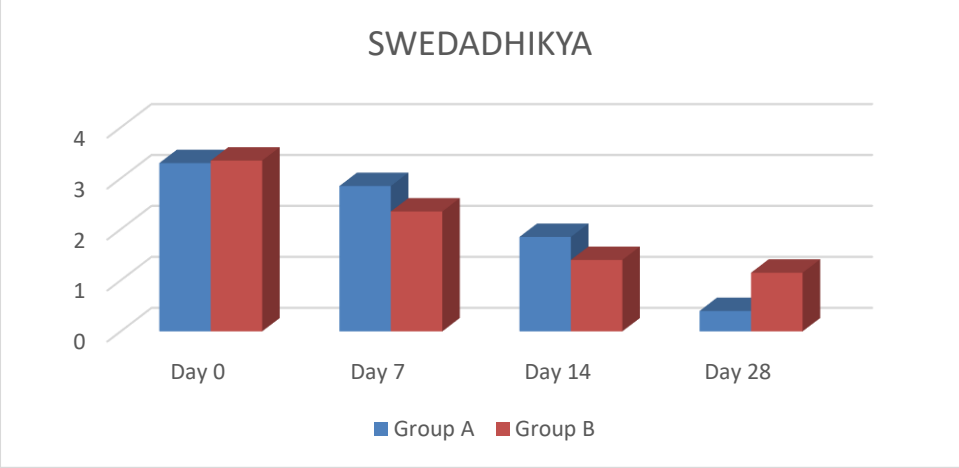


Table-6, Effect of Group-A and B on *Daurbalya of Madhumeha*

Symptom	GROUP A								
	Mean score				%	S.D (±)	S.E (±)	T Value	p value
	Day 0			BT-AT					
Daurbalya	2.80	Day 7	2.40	0.40	14.29	0.503	0.115	2.76	<0.05
		Day 14	1.40	1.40	50.00	0.503	0.026	9.65	<0.05
		DAY 28	0.30	2.50	89.29	0.513	0.118	17.91	<0.05
	GROUP B								
	2.80	Day 7	1.85	0.95	33.93	0.224	0.051	7.72	<0.05
		Day 14	1.15	1.65	58.93	0.489	0.012	13.41	<0.05
		DAY 28	0.80	2.00	71.43	0.459	0.105	12.09	<0.05

Effect on *Daurbalya*:-

In this work of 20 patients studied in *Madhumeha* with Group-A ***Daurbalya*** revealed are given in detail in Table No.6. Statistical analysis showed that the mean score which was 2.80 before the treatment was reduced to 0.30 after the treatment with 89.29% improvement and there is a statistically significant. (P<0.05) results are graphically represented in figure no 5. In this work of 20 patients studied in *Madhumeha* with Group-B ***Daurbalya*** revealed are given in detail in Table No.6. Statistical analysis showed that the mean score which was 2.80 before the treatment was reduced to 0.80 after the treatment with 71.43% improvement and there is a statistically significant. (P<0.05) results are graphically represented in figure no 5:

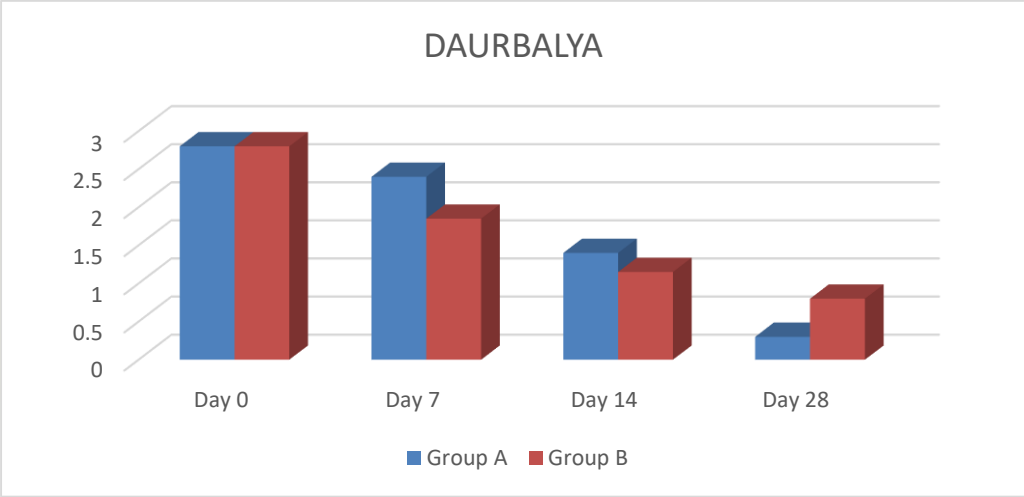


Table-7, Effect of Group-A and B on *Alasya* of *Madhumeha*

Symptom	GROUP A								
	Mean score				%	S.D (±)	S.E (±)	T Value	p value
	Day 0			BT-AT					
Alasya	3.55	Day 7	2.95	0.60	16.90	0.503	0.115	4.82	<0.05
		Day 14	1.90	1.65	46.48	0.489	0.026	12.38	<0.05
		DAY 28	0.45	3.10	87.32	0.553	0.127	19.21	<0.05
	GROUP B								
	3.55	Day 7	2.55	1.00	28.17	0.000	0.000	6.20	<0.05
		Day 14	1.50	2.05	57.75	0.224	0.000	12.67	<0.05
		DAY 28	1.00	2.55	71.83	0.510	0.117	16.62	<0.05

Effect on *Alasya*:-

In this work of 20 patients studied in *Madhumeha* with Group-A ***Alasya*** revealed are given in detail in Table No.7. Statistical analysis showed that the mean score which was 3.55 before the treatment was reduced to 0.45 after the treatment with 87.32% improvement and there is a statistically significant. (P<0.05) results are graphically represented in figure no 6.In this work of 20 patients studied in *Madhumeha* with Group-B ***Alasya*** revealed are given in detail in Table No.7. Statistical analysis showed that the mean score which was 3.55 before the treatment was reduced to 1.00 after the treatment with 71.83% improvement and there is a statistically significant. (P<0.05) results are graphically represented in figure no 6

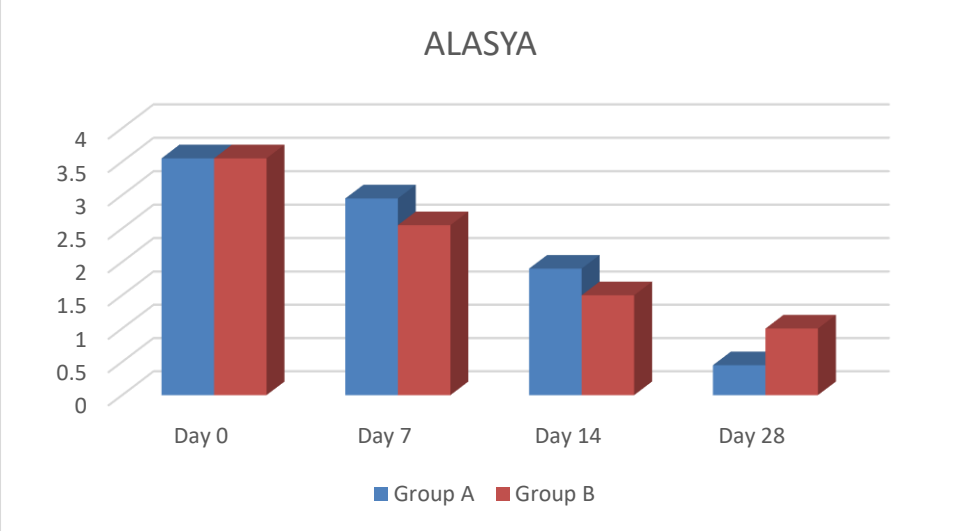


Table-8, Effect of Group-A and B on *Nidradhikyata* of *Madhumeha*

Symptom	GROUP A								
	Mean score				%	S.D (±)	S.E (±)	T Value	p value
	Day 0			BT-AT					
Nidradhikyata	3.10	Day 7	2.70	0.40	12.90	0.503	0.115	3.18	<0.05
		Day 14	1.60	1.50	48.39	0.607	0.026	11.38	<0.05
		DAY 28	0.35	2.75	88.71	0.444	0.102	21.27	<0.05
	GROUP B								
	3.35	Day 7	2.35	1.00	29.85	0.000	0.000	6.46	<0.05
		Day 14	1.25	2.10	62.69	0.308	0.000	14.21	<0.05
		DAY 28	0.80	2.55	76.12	0.510	0.117	17.86	<0.05

Effect on *Nidradhikyata*:-

In this work of 20 patients studied in *Madhumeha* with Group-A ***Nidradhikyata*** revealed are given in detail in Table No.8. Statistical analysis showed that the mean score which was 3.10 before the treatment was reduced to 0.35 after the treatment with 88.71% improvement and there is a statistically significant. (P<0.05) results are graphically represented in figure no 7,In this work of 20 patients studied in *Madhumeha* with Group-B ***Nidradhikyata*** revealed are given in detail in Table No.8. Statistical analysis showed that the mean score which was 3.35 before the treatment was reduced to 0.80 after the treatment with 76.12% improvement and there is a statistically significant. (P<0.05) results are graphically represented in figure no 7:

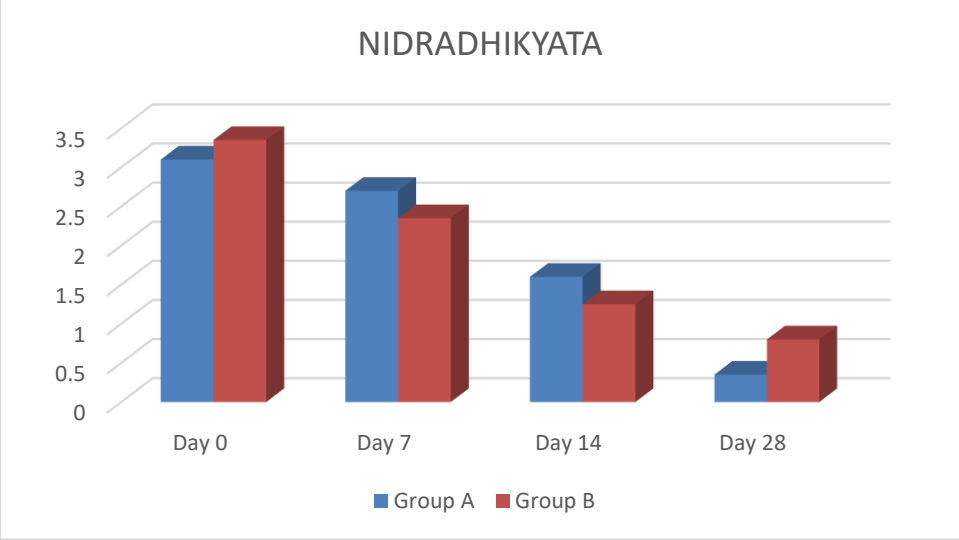


Table-9, Effect of Group-A and B on FBS of *Madhumeha*

Symptom	GROUP A								
	Mean score				%	S.D (±)	S.E (±)	T Value	p value
	Day 0			BT-AT					
FBS	148.05	Day 7	139.10	8.95	6.05	4.161	0.955	2.07	<0.05
		Day 14	119.55	28.50	19.25	12.484	0.219	6.89	<0.05
		DAY 28	110.60	37.45	25.30	13.594	3.119	9.72	<0.05
	GROUP B								
	151.15	Day 7	140.40	10.75	7.11	2.633	0.604	2.29	<0.05
		Day 14	123.90	27.25	18.03	11.566	0.139	6.82	<0.05
		DAY 28	113.25	37.90	25.07	12.977	2.977	9.81	<0.05

Effect on FBS:-

In this work of 20 patients studied in *Madhumeha* with Group-A **FBS** revealed are given in detail in Table No.9. Statistical analysis showed that the mean score which was 148.05 before the treatment was reduced to 110.60 after the treatment with 25.30% improvement and there is a statistically significant. (P<0.05) results are graphically represented in figure no 8.In this work of 20 patients studied in *Madhumeha* with Group-B **FBS** revealed are given in detail in Table No.9. Statistical analysis showed that the mean score which was 151.15 before the treatment was reduced to 113.25 after the treatment with 25.07% improvement and there is a statistically significant. (P<0.05) results are graphically represented in figure no 8:

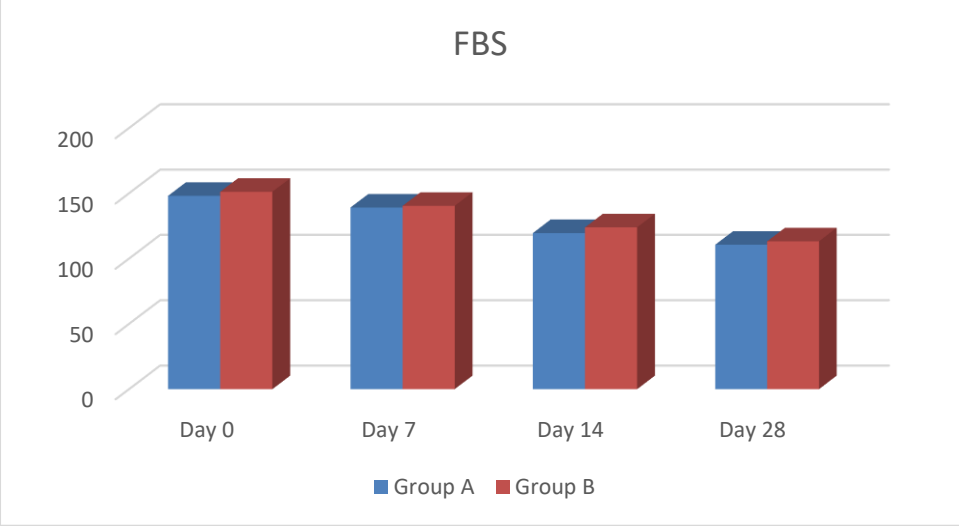


Table-10, Effect of Group-A and B on PPBS of *Madhumeha*

Symptom	GROUP A								
	Mean score				%	S.D (±)	S.E (±)	T Value	p value
	Day 0			BT-AT					
PPBS	224.20	Day 7	200.20	24.00	10.70	12.435	2.853	4.39	<0.05
		Day 14	151.25	72.95	32.54	17.157	0.654	14.98	<0.05
		DAY 28	134.60	89.60	39.96	19.022	4.364	20.51	<0.05
	GROUP B								
	242.45	Day 7	220.85	21.60	8.91	5.595	1.284	3.29	<0.05
		Day 14	150.05	92.40	38.11	22.488	0.294	17.86	<0.05
		DAY 28	134.55	107.90	44.50	22.962	5.268	21.00	<0.05

Effect on PPBS:-

In this work of 20 patients studied in *Madhumeha* with Group-A **PPBS** revealed are given in detail in Table No.10. Statistical analysis showed that the mean score which was 224.20 before the treatment was reduced to 134.60 after the treatment with 39.96% improvement and there is a statistically significant. (P<0.05) results are graphically represented in figure no 9. In this work of 20 patients studied in *Madhumeha* with Group-B **PPBS** revealed are given in detail in Table No.10. Statistical analysis showed that the mean score which was 242.45 before the treatment was reduced to 134.55 after the treatment with 44.50% improvement and there is a statistically significant. (P<0.05) results are graphically represented in figure no 9:

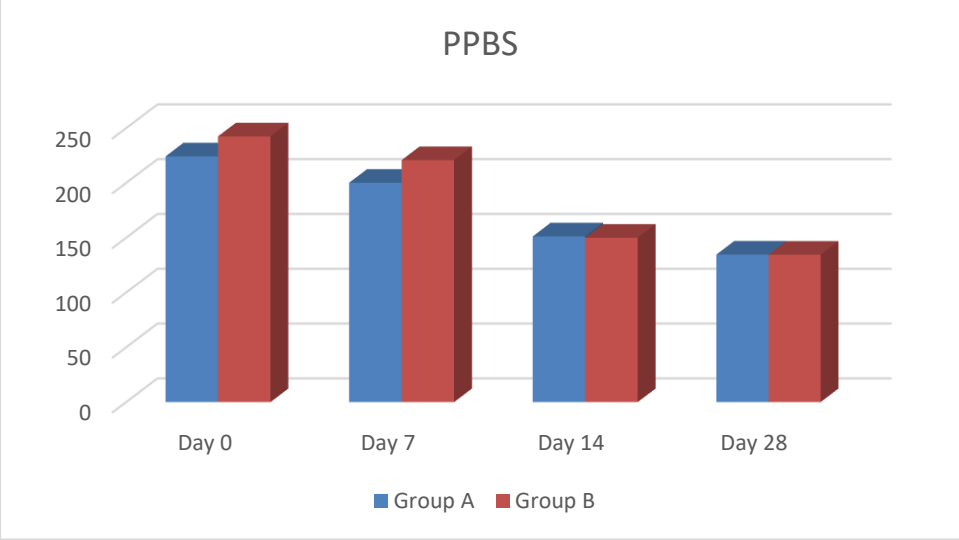


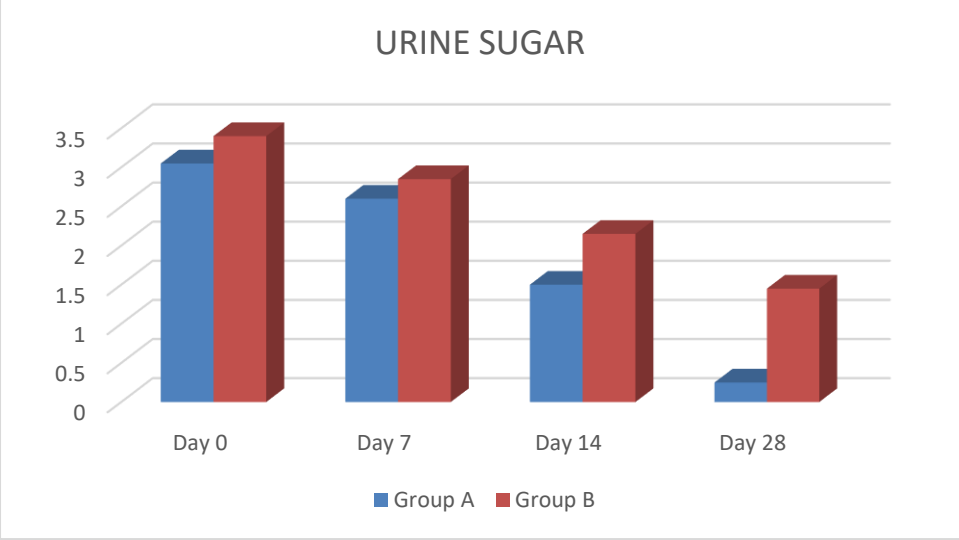
Table-11, Effect of Group-A and B on Urine Sugar of *Madhumeha*

Symptom	GROUP A								
	Mean score				%	S.D (±)	S.E (±)	T Value	p value
	Day 0			BT-AT					
Urine Sugar	3.05+	Day 7	2.60+	0.45+	14.75	0.510	0.117	2.21	<0.05
		Day 14	1.50+	1.55+	50.82	0.510	0.027	7.57	<0.05
		DAY 28	0.25+	2.80+	91.80	0.616	0.141	14.24	<0.05
	GROUP B								
	3.40+	Day 7	2.85+	0.55+	16.18	0.510	0.117	3.18	<0.05
		Day 14	2.15+	1.25+	36.76	0.639	0.027	6.67	<0.05
		DAY 28	1.45+	1.95+	57.35	0.759	0.174	10.25	<0.05

Effect on Urine Sugar:-

In this work of 20 patients studied in *Madhumeha* with Group-A **Urine Sugar** revealed are given in detail in Table No.11. Statistical analysis showed that the mean score which was 3.05 before the treatment was reduced to 0.25 after the treatment with 91.80% improvement and there is a statistically significant. (P<0.05) results are graphically represented in figure no 10:

In this work of 20 patients studied in *Madhumeha* with Group-B **Urine Sugar** revealed are given in detail in Table No.11. Statistical analysis showed that the mean score which was 3.40 before the treatment was reduced to 1.45 after the treatment with 57.35% improvement and there is a statistically significant. (P<0.05) results are graphically represented in figure no 10:

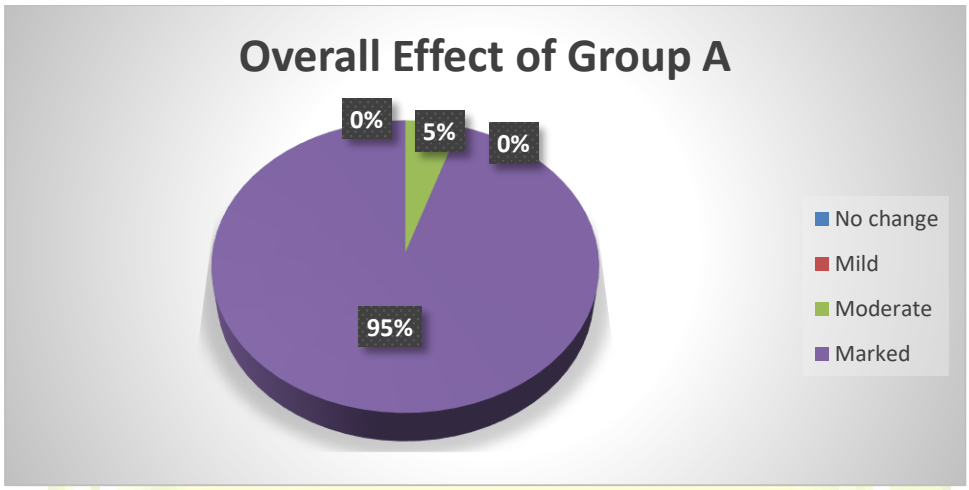


ASSESSMENT OF TOTAL EFFECT OF THERAPY

Table No 12. Overall effect of *Medoghnarasayan Vati* Group-A

EFFECT OF TREATMENT IN GROUP - A		
Class	**Grading**	**No of patients**
0-25%	No change	0
26%-50%	Mild	0
51% - 75%	Moderate	1
76% - 100%	Marked	19

Fig no. 11 Result on Group A



Effects of *Shilajitwdi Vati* (Group-B)

Table No. 13 Overall effect of Group-B

EFFECT OF TREATMENT IN GROUP – B		
Class	**Grading**	**No of patients**
0-25%	No change	0
26%-50%	Mild	0
51% - 75%	Moderate	11
76% - 100%	Marked	9

Fig no. 12 Result on Group B

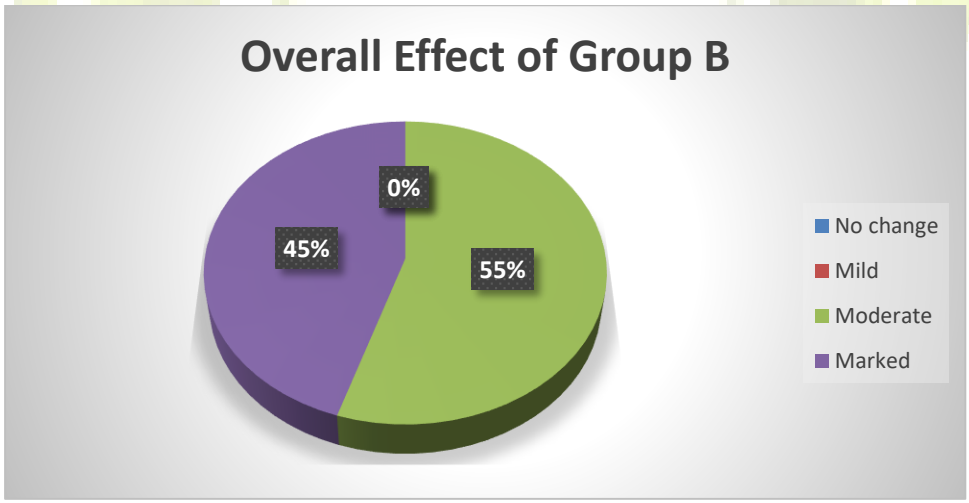


Table No.14 Comparative results of Group-A and Group-B

Signs and Symptoms	Group A (Mean Score)	Group B (Mean Score)	T Value	P Value
Prabhutmutrata	1.35	1.45	0.79	>0.05
Kshudha	1.60	1.65	0.40	>0.05
Mutramadhurya	2.09	2.04	0.38	>0.05
Swedadhikya	2.10	2.06	0.30	>0.05
Daurbalya	1.73	1.65	0.64	>0.05
Alasya	2.21	2.15	0.53	>0.05
Nidradhikyata	1.94	1.94	0.00	>0.05
FBS	129.33	132.18	0.88	>0.05
PPBS	177.56	186.98	2.61	<0.05
URINE SUGAR	1.85	2.46	4.53	<0.05

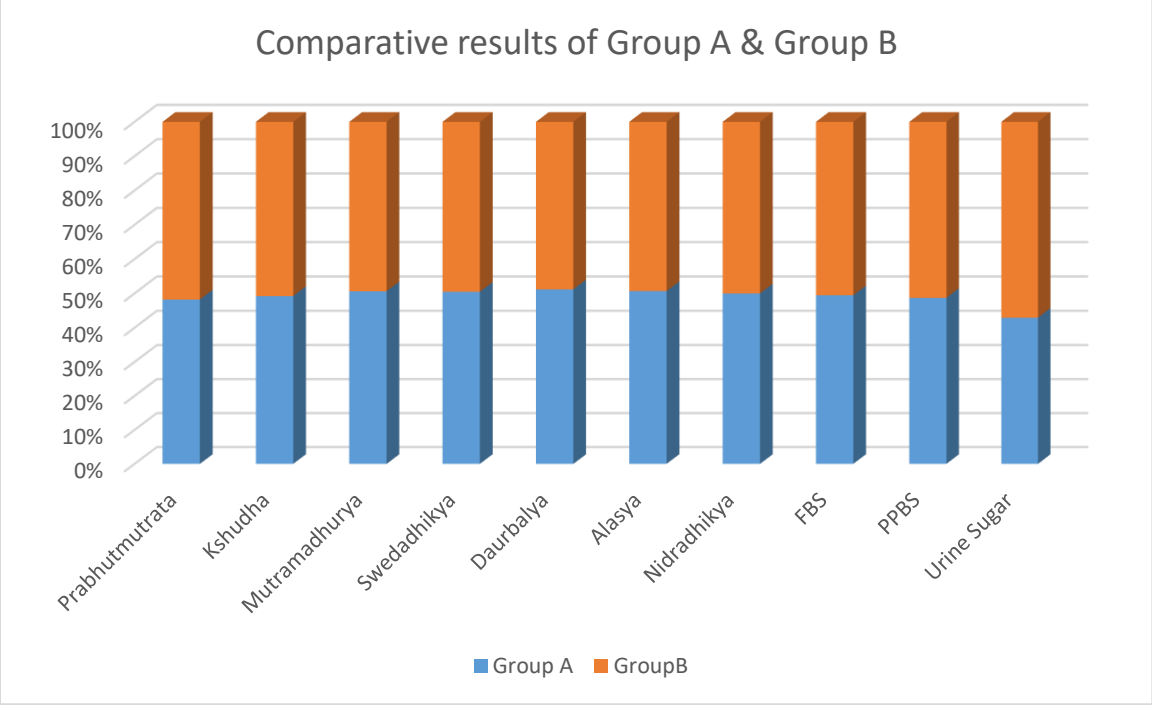


Table no 15 Comparative analysis of results of Group A and Group B

Group A	Group B	Mean Difference	SE (±)	T Value	P value
87.11	**73.29**	**13.82**	**2.08**	**6.58**	**<0.05**

Comparative analysis of the overall effect of the treatments in both the groups was done by statistically with Un Paired T test. The test shows that the treatment is significant in Group A when compared to Group B. Group A overall result is 87.11% and Group B overall result is 73.29%.

DISCUSSION:

Ayurveda in fact is the first medical science which identified, diagnosed and managed *Madhumeha*. *Madhumeha* can be co related with Diabetes Mellitus which is having similar pathogenesis and manifestations. *Madhumeha* mostly originates due to the individuals sedentary life, changing life style, increased stress and strain. Ayurveda divides the various *hetus* of the *madhumeha* as, ***Ahara Vidhi Viruddha Hetus*** *likeVishmashan and Adhyashan,* ***Jalapana Vidhiviruddha Hetu*** *like Ushapana, Nishapana Bhojanottar Jalapana,* ***Viharaj Hetu****s like Divaswap, Ratro jagaran Avyayam,* ***Mansik Hetu*** *like Chinta* All these were findings of study which indicate *Santarpanjanya and Apathyanimmitaja* origin of disease. So this study revalidates the *Nidan Parivarjan* is mandatory for the results in the treatment, need of *Hetu Viparit Chikitsa.* Both Group A (*Medoghnarasayana Vati*) and Group B (*Shilajitvadi Vati)* shown higly significant result in reduction of the subjective parameters quantity of urine like *Prabhutmutrata, Daurbalya, Mutramadhurya* symptoms ($p<0.05$). The Group A was found significant when compared with Group B.Both the Group had highly significant result in reduction in the *Mutramadhurya* ($p<0.05$) and in the comparison between both groups, Group A was not significant when compared with Group B.Both the Group had highly significant result in reduction in the *Kshudha* ($p<0.05$) and in the comparison between both groups, Group A was found significant when compared with Group B. In this study Both Groups A and B shown highly significant changes in objective parameters like BSL ($p<0.05$) and Post

Prandial Blood Sugar Levels. Group A is significant when compared with Group B for fasting blood sugar and not significant for post prandial blood sugar. It is observed that in this study that *Pathyakar Ahara*, Vihara with lifestyle modification and some Ayurvedic medication gives better result in reducing complications of type 2 Diabetes Mellitus. The present study was carried out on the small sample size for limited period and it showed encouraging results in patients of *Madhumeha*. So further study is needed with modification in groups.

CONCLUSION

A scientific discussion on the study gives rise to some fruitful conclusions. As per the observation drawn from this study, we can conclude that, the *Medoghnarasayana vati* have shown better effect on the patients of *Madhumeha* by *Samprapti Bhanga* of disease, with significant reduction in the symptoms of *Madhumeha* like. *Prabhutmutrata, Kshudha, Mutramadhurya, Swedadhikya, Daurbalya, Alasya, Nidradhikyata.* It has also shown changes in biochemical parameter Fasting Blood Sugar Level, Post Prandial Blood Sugar Level, Urine Sugar level. The study has shown fairly good changes in blood sugar levels and Urine Sugar levels throughout the follow up of 28 days but extended follow up is needed to lower down the dose of conventional *hypoglycaemic* agents and to prevent the complication of Diabetes mellitus type 2. *Madhumeha*, TYPE 2 Diabetes Mellitus is a life style disorder with metabolic crises, so role of life style management in addition with the *Ayurvedic chikitsa* can be studied to see the effect on reduction of *Madhumeha* & complication of DM type 2 and in reduction for control the side effects.

The details study of role of *Hetu viparita chikitsa* in management of *Madhumeha*. Further study need for newly diagnosed patient's i.e having very less chronicity that can be managed with the help of only Ayurvedic treatment. Use combine ayurvedic formulation to control *Madhumeha*

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