



## A critical analysis of *Satmya* with special reference to *Madhumeha* (Type-2 Diabetes Mellitus) and certain biochemical parameters

Santosh Kumar Ranjan<sup>1</sup>, Byadgi P.S<sup>\*2</sup>, Tripathi N.S<sup>1</sup>

<sup>1</sup>Department of Kriya Sharir, Faculty of Ayurveda, Institute of Medical Science, Banaras Hindu University, Varanasi, Uttar Pradesh, India

<sup>2</sup>Department of Vikriti Vigyana, Faculty of Ayurveda, Institute of Medical Science, Banaras Hindu University, Varanasi, Uttar Pradesh, India

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### ABSTRACT

*Ayurveda* is an ancient medical science that deals with the well being of the human being as well as measures to treat diseases. There are two main purpose of *Ayurveda*, first being to maintain the healthy status of the healthy people and the second one is to cure the disease of the unhealthy person. For the diagnosis of the disease, ancient *Acharyas* have given much importance of knowledge obtained by *Pratyaksha* (direct perception), *Anumana* (inference), *Aptopadesha* (testimony), and *Yukti* (reasoning) during the examination of the patient for a successful treatment. To fulfill this purpose, *Atura-Pariksha* (examination of patients) *Dravya Pariksha* (examination of medicinal drug and preparations) and *Roga-Rogi Pariksha* (examination of the patient and disease) etc. are a very important tool. The concept of *Satmya* is described under *Dashavidha Atura Pariksha* (tenfold examination), and it is an important concept in both *Swastha-rakshana* (maintenance of health) and *Aturasya Vikara Prashamana* (treatment of disease). The concept of *Satmya* is explained by different *Acharyas* elaborately in their own way. The process of adopting *Satmya* from *Asatmya* is well explained in the classics. To evaluate the significance of *Satmya pariksha* in *Madhumeha* (T2DM) patients. Assessment of *Satmya* status and biochemical parameters in *Madhumeha* (T2DM) patients. *Satmya* might be an important tool for the assessment of the strength of patient and also helpful for proper planning of treatment.



\*Corresponding Author

Name: Byadgi P.S

Phone: 9450711759

Email: psbyadgi@gmail.com

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### INTRODUCTION

*Ayurveda*, the traditional medicine of India, is one of the most comprehensive and longest practiced natural health care systems in the world. There was no substitute to *Ayurveda* because it explains the measures to prevent the diseases as well as measures to enhance the immune status of a healthy individual and diseased persons along with treatment measures for diseases management. The lifestyles of people were well refined due to which longevity of the human being was enhanced compared to earlier due to advancement in medicine. One of the reasons might be due to the use of *Satmya Ahara* and *Vihara* (Shastri, 2017, 2018). The concept of *Satmya* can be translated as an "A thing or substance or

habit that is useful for the body" (Sharma and Das, 2017a; Acharya, 2013). The concept of *Satmya* in *Ayurveda* is termed as the law of adaptation or habituation (Pandey and Chaturvedi, 2018a).

*Satmya* can be of 3 types- *Pravara Satmya* (*Sarva Rasa Satmya*), *Avara Satmya* (*Eka Rasa Satmya*), *Madhyam Satmya* (*Vyamishra Satmya*) (Sharma and Das, 2017b). If an Individual for whom Ghee, milk, oil and meat soup and the drugs and diets having all six tastes are wholesome become more strengthful, they have more power to face problems and have long life span (Srikanthamurthy, 2016b) and he has been said of *Pravara Satmya* (Sharma and Das, 2017c). If an Individual adopt wholesome to un-unctuous (non oily- *Ruksha*) things and drugs and diets having only one particular taste (*Rasa*), attains less strength, less power to face problems, have a smaller life span. There are limitations in the relation of drugs for treatment in his diseased condition (*Avara Satmya*) (Pandey and Chaturvedi, 2018b). Combination of both types of homologation (*Pravara Satmya* and *Avara Satmya*) individuals attains moderate strength (Sharma and Das, 2017c).

It is a useful clinical tool for the assessment of the strength of the patient. 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. Improper diet and sedentary lifestyle are showing an upward trend in India (Pandey and Chaturvedi, 2018b). This has lead to emergence of several health problems among those *Madhumeha* (Type 2 Diabetes Mellitus) is emerging as the major problem. The lifestyle of the people has also changed and had a physiological and psychological impact on the physical and mental status of a person.

The main objective of our study is to find out the significant role of *Satmya* in the management of *Madhumeha* (T2DM) and implementation of these findings in early diagnosis and prevention of *Madhumeha* (T2DM) (Joshi and Parikh, 2007).

Therefore, it was hypothesized that *Satmya* may be an important tool for diagnosis, treatment, prognosis and preventive aspect for a lifestyle disorder, i.e. *Madhumeha* (T2DM). Keeping the facts in view, the present study entitled "A Critical Analysis of *Satmya* with Special Reference to *Madhumeha* (Type 2 Diabetes Mellitus) and Certain Biochemical Parameters." has been done.

Various biochemical parameters (FBS, PPBS, HbA1c, Hb%, RBCs counts, WBCs counts, Platelet counts, DLC, Lipid profile, LFT, KFT etc.) have been studied as per *Satmya* in *Madhumeha* (T2DM). Therefore, it is very essential to make out a clue regarding the

relation of *Satmya* and evolutionary causes of *Madhumeha* (Type 2 Diabetes Mellitus).

## MATERIALS AND METHODS

The present study entitled "A Critical Analysis of *Satmya* with Special Reference to *Madhumeha* (Type 2 Diabetes Mellitus) and Certain Biochemical Parameters" has been carried out in the Department of *Kriya Sharir*, Department of *Vikriti Vigyan*, Faculty of *Ayurveda*, and from the OPD *Vikriti Vigyana* and OPD and IPD of *Kaya Chikitsa*, S.S Hospital, IMS, BHU, *Varanasi*.

The objectives of this study was,

1. To find out the significant role of *Satmya*, in the assessment of strength in *Madhumeha* (Type 2 Diabetes Mellitus).
2. Implementation of these findings for better therapeutic plan in *Madhumeha* (Type 2 Diabetes Mellitus).
3. To understand the incidence ratio, various *Satmyas* in the manifestation of *Madhumeha* (diabetes mellitus) with different *Dhatu Satmya*.

### Plan of Study

The detailed present research plan of the present study:

1. Review of the literature (Ayurvedic and contemporary)
2. Registration of the patients of *Madhumeha* (Type 2 Diabetes Mellitus) according to inclusion and exclusion criteria after obtaining written consent from them.
3. Assessment of their *Satmya* with the help of standard Pro-forma designed on the basis of classical description.
4. Biochemical investigation such as FBS, PPBS and HbA1c of all the patients.
5. Haematological investigation including Hb%, RBC Count, WBC count, RFT, LFT of all the patients.
6. Statistical analysis.

### Registration of Patients

The present research work is an observational study conducted in a known case of *Madhumeha* (Type 2 Diabetes Mellitus), and patients were registered from the OPD of *Vikriti Vigyana*, and OPD/IPD of

*Kaya Chikitsa*, Sir Sunder Lal Hospital, Institute of Medical Sciences, BHU through purposive sampling method. Total 150 patients of *Madhumeha* (Type 2 Diabetes Mellitus) were registered initially out of which 28 subjects were excluded due to incomplete data, and finally, 122 subjects were registered. The inclusion and exclusion criteria employed were as follows:

### Inclusion Criteria

1. Age of the patients in between 25-65 years of either sex.
2. The patient is fulfilling the diagnostic criteria of *Madhumeha* (Type 2 Diabetes Mellitus) but not suffering with any secondary complications.
3. Volunteer willing to participate in the study by giving their written consent on prescribed format.

### Exclusion Criteria

1. Age of the patient <25 years and >65 years.
2. The subjects not willing to participate in the study.
3. The patients having any type of other known physical or mental disorder or secondary complications of *Madhumeha* (Type 2 Diabetes Mellitus).

The patients were given detailed information about purpose and methods, used in the study, and written consent was obtained from them before registration. This study was approved from the ethical committee of Institute of medical science, Banaras Hindu University and PG Medical board, Institute of Medical Science, Banaras Hindu University, Varanasi. (Letter No. D/2015-16/EC/147)

### Assessment of *Satmya*

Assessment of *Satmya* was done by using proforma designed by Ranjan S.K et al. 2017 through screening various *Ayurvedic* texts to understand the role of *Satmya* in terms of different type of foods and *Rasa* preferred performance of the physical activity by the patients. Initially total 17 questions were designed on the basis of various *Pathya- Apathya* diet and regimens in *Ayurveda* texts to screen the patients for their *Satmyata* (Homologation) but later on, one question pertaining to use of *Mansa Rasa* was omitted to avoid the biasness between vegetarian and non-vegetarian patients. Thus, finally, the proforma contained 16 questions. Each question

contains four options. The patients who responded for 1<sup>st</sup> and 2<sup>nd</sup> option were considered as *Avara Satmya*, and one mark was allotted for the same. The patients who responded for 3<sup>rd</sup> option were considered as *Madhyam Satmya*, and two marks were allotted. Furthermore, the patients who responded for 4<sup>th</sup> option were considered as *Pravara Satmya*, and three marks were allotted for the same, to assess the *Satmyata* (Homologation) minimum 16 and maximum of 48 marks were decided. Accordingly, the total score were allotted based upon the preference of the food and other activities. The score allotted was grouped into three categories. Its assessment was as follows:

16-26 marks = *Avara Satmya*

27-37 marks = *Madhyama Satmya*

38-48 marks = *Pravara Satmya*

### Statistical Analysis

All the raw data collected from the patients were filled into Excel sheet.

The Analysis of data has been done by using Statistical software SPSS version 16.0.

The following Statistical tests were applied wherever found necessary:

(a) Mean of different observations: The mean of different observations in each group was calculated with the help of the following formula:

$$\bar{X} = \frac{\sum x}{n}$$

Where,

$\bar{X}$  = mean

$\sum$  = a sum of

x = a single observation

n = number of observations

### (b) Standard Deviation (S.D.)

To measure the variability in the given set of data standard deviation (SD) is calculated using the following formula.

$$SD = \sqrt{\frac{\sum x^2 - \frac{(\sum x)^2}{n}}{n - 1}}$$

### One way ANOVA

For intergroup comparison of means of more than 2 groups, one way analysis of variance, F-test was applied followed by appropriate Post-Hoc Test for pair-wise determination of significance.

### Chi-square test

For intragroup comparison of ordinal variable and dichotomous variable Friedman chi-square test had been applied respectively. Pearson chi-square test was used for intergroup comparison.

### Statistical Significance

$p < 0.05$  considered as statistically significant and

$p < 0.01$  or  $p < 0.001$  as statistically highly significant

$p > 0.05$  not statistically significant.

## RESULTS AND DISCUSSION

The present study entitled "A Critical Analysis of *Satmya* with Special Reference to *Madhumeha* (Type 2 Diabetes Mellitus) and Certain Biochemical Parameters" has been carried out in association with Department of *Kriya Sharir*, Department of *Vikriti Vigyan*, Faculty of *Ayurveda*, and from the OPD of *Vikriti Vigyan* and OPD and IPD of *Kaya Chikitsa*, S. S Hospital, Institute of Medical Sciences, Banaras Hindu University, Varanasi.

**Table 1: Showing gender wise distribution of Madhumeha (Type 2 Diabetes Mellitus) patients**

Gender	Number	Percentage
Male	84	(68.85%)
Female	38	(31.15%)
Total	122	100%

The Table 1 shows that out of 122 patients, 84 (68.85%) subjects were male and 38 (31.15%) were female.

The Table 2 shows that the mean FBS and PPBS level in *Pravara Satmya* ( $168.85 \pm 25.33$ ,  $307.52 \pm 45.84$ ) patients was found maximum and whereas it is minimum *Madhyam Sara* ( $160.01 \pm 31.31$ ,  $259.45 \pm 60.66$ ) patients. The mean value of HbA1c was also found highest in *Pravara Satmya* ( $8.23 \pm 0.82$ ) patient, but it was found minimum in *Avara Satmya* ( $7.97 \pm 1.86$ ) patients.

The Table 3 shows the mean value of Hb, Platelets, WBC and RBC as per different *Satmya* of the patients. It was observed that Hemoglobin concentration was approximately the same in all the three types of *Satmya* but little higher in *Madhyam* type of *Satmya* within the physiological limits. Similarly the mean value of platelet count was higher in *Pravara Satmya* ( $172777.77 \pm 65373.49$ ) and lower in *Avara Satmya* ( $171713.29 \pm 68788.03$ ), WBCs count higher in *Avara Satmya* ( $9301.17 \pm 12735.47$ ) and lower in *Madhyam Satmya* ( $7075.06 \pm 2421.67$ ) and RBCs count was almost similar in *Pravara* ( $4.72 \pm .36$ ) and *Avara Satmya* ( $4.72 \pm .52$ ) and lower in *Madhyam*

*Satmya* ( $4.63 \pm .49$ ) but all the variation was within physiological limits.

The Table 4 reveals that the mean value of Neutrophil was high normal in *Madhyam Satmya* ( $60.25 \pm 8.91$ ) in comparison to *Pravara Satmya* ( $58.32 \pm 6.67$ ) and *Avara Satmya* ( $57.27 \pm 8.01$ ). Similarly, the mean value of Lymphocyte was high normal in *Avara Satmya* ( $32.46 \pm 7.56$ ), Eosinophil level was higher in *Pravara Satmya* ( $4.14 \pm 2.77$ ), Monocyte level was higher in *Madhyam Satmya* ( $6.64 \pm 1.62$ ), and Basophil level was higher in *Pravara Satmya* ( $0.40 \pm 0.24$ ). But all the variation was found within physiological limits.

The Table 5 shows the mean value of different aspect of Liver Function Test (LFT) as per the different type of *Satmya*. It was found that the mean of Serum Albumin was almost the same in all the three types of *Satmya*, i.e. *Pravara* ( $4.46 \pm 0.23$ ), *Madhyam* ( $4.46 \pm 0.23$ ) and *Avara satmya* ( $4.48 \pm 0.39$ ) respectively. Similarly the mean value of Serum Alkaline phosphatase was found higher in *Madhyam Satmya* ( $130.69 \pm 45.06$ ), Serum Direct Bilirubin was highest in *Avara Satmya* ( $0.29 \pm 0.07$ ), Serum Total Bilirubin was highest in *Madhyam Satmya* ( $0.79 \pm 0.20$ ), SGPT was highest in *Madhyam Satmya* ( $39.40 \pm 19.44$ ) and SGOT was highest in *Avara Satmya* ( $32.45 \pm 13.42$ ) within physiological limits.

The Table 6 shows the mean variation of Serum Creatinine, Blood Urea, Specific gravity and pH of the Urine as per the different type of *Satmya* in which all variation was found within physiological limits. Mean value of Serum Creatinine was higher in *Avara Satmya* ( $1.05 \pm 0.50$ ), Blood Urea in *Pravara Satmya* ( $27.04 \pm 9.57$ ), Specific gravity in *Avara Satmya* ( $1.02 \pm 0.4$ ) and Urine pH in *Madhyam Satmya* ( $5.98 \pm 0.43$ ).

Table 7 shows the mean variation of the lipid profile of patients as per the different type of *Satmya*. The mean variation of Total Cholesterol and HDL was observed higher in *Pravara Satmya* ( $199.33 \pm 37.67$ ,  $48.76 \pm 9.63$ ) and minimum in *Avara Satmya* ( $170.46 \pm 45.32$ ,  $45.79 \pm 11.38$ ) respectively. Again the mean value of LDL and Serum Triglyceride was observed higher in *Pravara Satmya* ( $115.04 \pm 27.76$ ) and *Avara Satmya* ( $174.06 \pm 56.88$ ) respectively and minimum in *Madhyam Satmya* ( $103.90 \pm 19.51$ ,  $151.03 \pm 35.4$ ) in both cases. All the mean variation was within physiological limits.

*Prameha* is a syndrome manifest by involving complex interaction between *Dosha and Dushya* in *Srotases* (multiple systems) especially *Mutravaha Srotas* (Srikanthamurthy, 1987) leading to development of several distinct types and are caused by a complex interaction of genetics (*Sahaja, Kulaja,*

**Table 2: Showing the relationship of mean  $\pm$  SD of Fasting Blood Sugar, Post Prandial Blood Sugar and HbA1c in Madhumeha (Type 2 Diabetes Mellitus) patients as per Satmya**

Variable Mean $\pm$ SD	Satmya			Between Group Comparison, One Way ANOVA
	<i>Pravara</i> 18(14.75%)	<i>Madhyam</i> 39(31.96%)	<i>Avara</i> 65(53.27%)	
FBS	168.85 $\pm$ 25.33	160.01 $\pm$ 31.31	161.55 $\pm$ 37.34	F=1.26, p=0.28
	307.52 $\pm$ 45.84	259.45 $\pm$ 60.66	270.04 $\pm$ 63.33	F=1.56, p=0.08
HbA1c	8.23 $\pm$ 0.82	8.11 $\pm$ 2.12	7.97 $\pm$ 1.86	F=0.10, p=0.90

**Table 3: Showing the relationship of mean  $\pm$  SD of Hb, Platelets, WBC and RBC in Madhumeha (Type 2 Diabetes Mellitus) patients as per Satmya**

Variable	Satmya Mean $\pm$ SD			Between Group Comparison, One Way ANOVA
	<i>Pravara</i> 18(14.75%)	<i>Madhyam</i> 39(31.96%)	<i>Avara</i> 65(53.27%)	
Hb	12.99 $\pm$ 1.56	12.64 $\pm$ 1.23	12.22 $\pm$ 1.65	F=0.63, p=0.53
Platelets	172777.77 $\pm$ 65373.49	168536.36 $\pm$ 65669.16	171713.29 $\pm$ 68788.03	F=0.03, p=0.96
WBC	7675.55 $\pm$ 2809.37	7075.06 $\pm$ 2421.67	7301.17 $\pm$ 2735.47	F=0.03, p=0.36
RBC	4.72 $\pm$ 0.36	4.63 $\pm$ 0.49	4.72 $\pm$ 0.52	F=0.46, p=0.62

**Table 4: Showing the relationship of mean  $\pm$  SD of Differential Leukocyte count (DLC) in Madhumeha (Type 2 Diabetes Mellitus) patients as per Satmya**

Variable Mean $\pm$ SD	Satmya			Between Group Comparison, One Way ANOVA
	<i>Pravara</i> 18(14.75%)	<i>Madhyam</i> 39(31.96%)	<i>Avara</i> 65(53.27%)	
Neutrophil	58.32 $\pm$ 6.67	60.25 $\pm$ 8.91	57.27 $\pm$ 8.01	F=1.74,p=0.17
Lymphocyte	29.41 $\pm$ 5.21	30.60 $\pm$ 8.55	32.46 $\pm$ 7.56	F=0.99, p=0.37
Eosinophil	4.14 $\pm$ 2.77	3.75 $\pm$ 3.00	3.65 $\pm$ 2.60	F=0.11, p=0.89
Monocyte	6.22 $\pm$ 1.92	6.64 $\pm$ 1.62	5.85 $\pm$ 1.17	F=0.14, p=0.86
Basophil	0.40 $\pm$ 0.24	0.26 $\pm$ 0.17	0.31 $\pm$ 0.7	F=0.84, p=0.16

**Table 5: Showing the relationship of mean  $\pm$  SD of Liver Function Test (LFT) in Madhumeha (Type 2 Diabetes Mellitus) patients as per Satmya**

Variables	Satmya Mean $\pm$ SD			Between Group Comparison, One Way ANOVA
	<i>Pravara</i> 18(14.75%)	<i>Madhyam</i> 39(31.96%)	<i>Avara</i> 65(53.27%)	
Albumin	4.46 $\pm$ 0.23	4.46 $\pm$ 0.33	4.48 $\pm$ 0.39	F=0.03, p=0.96
Alkaline Phosphatase	117.66 $\pm$ 35.15	130.69 $\pm$ 45.06	127.49 $\pm$ 65.08	F=0.49, p=0.61
Bilirubin Direct	0.20 $\pm$ 0.06	0.27 $\pm$ 0.22	0.29 $\pm$ 0.07	F=0.62, p=0.53
Bilirubin Total	0.68 $\pm$ 0.29	0.79 $\pm$ 0.20	0.65 $\pm$ 0.38	F=0.35, p=0.70
SGPT	35.27 $\pm$ 14.22	39.40 $\pm$ 19.44	35.61 $\pm$ 16.07	F=0.23, p=0.79
SGOT	30.43 $\pm$ 8.62	29.75 $\pm$ 9.73	32.45 $\pm$ 13.42	F=0.37, p=0.68

**Table 6: Showing the relationship of mean  $\pm$  SD of Kidney Function Test (KFT) in Madhumeha (Type 2 Diabetes Mellitus) patients as per Sara**

Variables	Satmya Mean $\pm$ SD			Between Group Comparison, One Way ANOVA
	<i>Pravara</i> 18(14.75%)	<i>Madhyam</i> 39(31.96%)	<i>Avara</i> 65(53.27%)	
Creatinine	1.03 $\pm$ 0.40	0.96 $\pm$ 0.32	1.05 $\pm$ 0.40	F=0.36, p=0.69
Urea	27.04 $\pm$ 9.57	25.41 $\pm$ 7.02	23.41 $\pm$ 7.05	F=1.52, p=0.22
Specific Gravity	1.01 $\pm$ 0.01	1.00 $\pm$ 0.03	1.02 $\pm$ 0.4	F=0.57, p=0.56
Ph	5.87 $\pm$ 0.79	5.98 $\pm$ 0.43	5.85 $\pm$ 0.40	F=1.10, p=0.32

**Table 7: Showing the relationship of mean  $\pm$  SD of Lipid Profile in Madhumeha (Type 2 Diabetes Mellitus) patients as per Satmya**

Variables	Prakriti, Mean $\pm$ SD			Between Group Comparison, One Way ANOVA
	<i>Pravara</i> 18(14.75%),	<i>Madhyam</i> 39(31.96%)	<i>Avara</i> 65(53.27%)	
Total Cholesterol	199.33 $\pm$ 37.67	172.14 $\pm$ 36.08	170.46 $\pm$ 45.32	F=1.04, p=0.13
HDL	48.76 $\pm$ 9.63	47.67 $\pm$ 11.23	45.79 $\pm$ 11.38	F=0.44, p=0.63
LDL	115.04 $\pm$ 17.76	103.90 $\pm$ 19.51	109.71 $\pm$ 15.75	F=0.74, p=0.46
Triglyceride	165.65 $\pm$ 38.21	151.03 $\pm$ 35.4	174.06 $\pm$ 56.88	F=0.92, p=0.40

*Jataja, Adibala Pravitta, Anushangi*), lifestyle factors (*Apathyanimittaja*) and environmental factors and it is characterised by frequent and copious micturition with turbidity, i.e. *Prabhata avila mutrata*. (Srikanthamurthy, 2012a, 2016a).

Diabetes Mellitus (DM) refers to a group of common metabolic disorders that share the phenotype of hyperglycemia. The classical symptoms of diabetes mellitus is excessive urine production (polyuria) (Srikanthamurthy, 2012b), excessive thirst ((polydipsia), and increased hunger (polyphagia), these symptoms may be absent if the blood sugar is mildly elevated. Chronic hyperglycemia causes damage to the eyes, kidneys, nerves, heart and blood vessels. The adverse impact of hyperglycemia and the rationale for aggressive treatment have recently been reviewed (Schlienger, 2013; Byadagi, 2007).

A patient is to be examined with reference to his or homologation. Individual for whom ghee, milk, oil and meat soup as well as the drugs and diets having all the six tastes are endowed with strength, the power of facing difficult situations and longevity is termed as *Pravara Satmya* (Sharma, 2008). Those who are accustomed to ununctuous things, drugs and diets having only one particular taste are mostly possessed of less strength or power (or resistance) to face difficult situations are of smaller life span and of meagre accessories like drugs for the treatment of his disease is termed as *Avara Satmya* (Pandey and Chaturvedi, 2018d). If there is a combination of both these types of homologation, individuals are possessed of moderate strength (Pandey and Chaturvedi, 2018c) If an individual is accustomed to use only such drugs and diets having only one and the same taste will be unwholesome for him. In our study, *Avara Satmya* individuals were observed maximum suffering from *Madhumeha* (T2DM) (Saini and Byadgi, 2014).

A maximum number of participants were belong to *Avara Satmya* (65) followed by *Madhyama Satmya* (39) and least in *Pravara Satmya* (18). According to ancient *Acharyas*, One who is *Ruksha Satmya*, *Ekarasa Satmya* will be having *Alpabala*, *Alpayusha* and is *Alpakleshasaha*. "*Sarva Rasabhyaso Balkaranam, Eka Rasabhyaso Daurbalya Karanam* (Dwivedi and Goshwami, 2016). *Charaka* has mentioned the importance of *Satmya*, stating that *Sarva Rasabhyasa* is the reason for *Bala* and *Eka Rasabhyasa* for *Daurbalya*. *Daurbalya* is a vital sign of *Kaphakshaya* (Joshi and Parikh, 2007). This may leads to aggravation of *Vata* which when mixed with *Medas* (tissue fat) travel downward along the channels of urine, getting localised in the orifice of

the urinary bladder, begins to flow out and gives rise to *Madhumeha* (T2DM).

Highest range of FBS, PPBS and HbA1c in *Pravara Satmya*, shows that the patients of *Pravara Satmya* were probably taking high calorie and higher glycemic index value food and it indicates all these persons are not following the strict diet plan as advised by the physicians. Moreover, they may belong to *Avara Satmya*. FBS, PPBS and HbA1c were found minimum in *Avara Satmya* individuals. It indicates that the *Avara Satmya* individuals were following regular diet pattern as per physician advice as a result FBS, PPBS was found minimum in these persons.

Hb%, WBC, RBC and platelets count was found maximum in *Pravara Satmya* individuals. This may be due to the patients who were indulged in a strict diet plan as per physician advice. DLC was found within normal physiological limits. On applying one way ANOVA between groups comparison, a significant result was not observed.

## CONCLUSION

*Satmya* wise analysis it was concluded that the maximum number of *Madhumeha* (T2DM) patients were belongs to *Avara Satmya* followed by *Madhyama Satmya*, and least number of patients were belongs to *Pravara Satmya*.

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