CONSTITUTIONAL STUDY OF PATIENTS OF DIABETES MELLITUS VIS-À-VIS *MADHUMEHA*

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ABSTRACT: With the changing life style and sedentary habits of the modern era, incidence of diabetes mellitus is increasing throughout the world. The present study was launched to investigate the constitutional and socioeconomic features of diabetic patients and their clinical significance.

INTRODUCTION

Diabetes mellitus, the commonest endocrine disorder afflicts entire biological system. It is similar to *madhumeha* (one of the 20 *pramehas)* described by Caraka, Susruta, Vagabhatta and Madhava. The present work was undertaken to study the disease pattern in the local population and to evaluate the ayurvedic concept of *vyadhi,* for treating a disease *(Samprapati Vighatana).*

MATERIAL AND METHOD

A series of 50 patients of Diabetes mellitys vis-a-vis *Madhumeha* were selected from Kayachikitsa O.P.D / I.P.D of S.S Hospital, B.H.U., recording their registration, name, age, sex, address, occupation, monthly income, height, weight, dietary habits body build etc. General information regarding the disease, (severity / chronicity) was noticed.

Severity according to Jeslin Clinic Criteria

Controlled diabetic – Blood sugar fasting <100 mg%

Blood sugar after one hour < 150 mg% (of glucose intake)

Blood sugar after two hours <180 mg% (of glucose intake)

A patient having any type of blood sugar beyond the above mentioned limits is called uncontrolled diabetic.

Categories for chronicity of the disease

Group 1 – Patients just detected

Group 2 – Patients with less than one year H/O diabetes

Group 3 – Patients with one to three years H/O diabetes

Group 4 – Patients beyond three years H/O diabetes

Grade for severity of the disease

(Grade 1 being least severe and Grade 4 being most severe)

Grade 1: Fasting blood sugar < 100 mg%

PP blood sugar = 180 – 200 mg%

Grade 2: Fasting blood sugar = 100 – 120 mg%

PP blood sugar = 200 – 225 mg%

Grade 3: Fasting blood sugar = 120 – 200 mg%

PP blood sugar = 225 – 300 mg%

Grade 4: Fasting blood sugar ≥ 300 mg%

PP blood sugar ≥ 300 mg%

Apart from this, constitutional studies regarding physical typology and temperament were analysed for each patients. *Dosa prakriti* was analysed in terms of *Vatika, Paittika* and *Kaphaja* pattern as per the methods of Singh and Dubey (1970). *Manas prakriti* in terms of *Sattvika, Rajasika* and *Tamasika* as per method of Singh (1980) and temperamental types in terms of *cerebrotonic, somatotonic* and *viscerotonic* as per criteria of Sheldon (1944). Physical typology of the patients was studied in terms of ecotomorphic, mesomorphic and endomorphic as per criteria of Sheldon (1944). Associated diseases / complications if any were noticed. The predominance of *dosas* was discerned after diagnosing the patients on the ayurvedic lines. The *dhatus* affected by *dosas* were also determined. Vitiated *malas* and affected *Srotamsi* were determined.

A routine investigations of each patient including routine and microscopic urine examination, blood TC, DC, ESR, Hb%, Blood urea, Serum cholesterol and blood

L.F.T. were done. A glucose tolerance test was performed for each patient.

Diagnosis

A patient was diagnosed as diabetic if any one of the following conditions was found.

1. Unequivocal blood glucose elevation with classical symptoms of diabetes mellitus.

2. Increased fasting blood glucose for more than one time.

3. Increased PP blood glucose for more than one time.

A Glucose Tolerance Test (G.T.T) may confirm diabetes if:

i. Fasting blood sugar > 120 mg%

ii. Blood Sugar after one hour > 180 mg%

iii. Blood Sugar after two hours > 120 mg%

Exclusion criteria

The following patients were excluded from this study:

1. Patients with fasting blood sugar level > 300 mg% and / or patients with PP blood sugar > 400 mg%

2. Patients with insulin crisis / diabetic ketoacidosis / non ketotic hypero smolar diabetic coma.

3. Patients in M.I., with massive retinopathy or advanced gangrene etc (much complicated cases).

Observations and discussion

Age

Out of 50 cases in the present study, 48% patients belonging to the age group 30-50 years indicating maturity onset diabetes.

Sex

Contrary to reported norms, males were found affected more (72%) which may be attributed to the social atmosphere in this eastern region.

Occupation

The prevalence of disease was found more in service class (32%) and agriculture class (30%). A service man leads a sedentary life with worries and tensions which may be the cause of this. Agriculture class is found more in this area as such.

Body build

The study showed that 60% of the patients were of a average build. In maximum number of patients height: weight ration was between 1.4 : 1.5.

Dosa prakriti:

The maximum number of patients (32%) were *Kaphaj prakriti* which indicates that *Kapha Prakriti* people are more susceptible to this disease.

Manas prakriti:

Rajasika prakrti was predominant (48%) in patients of diabetes which may justify overeating and sedentary life style in these patients *(Prakrti-* Method of Singh 1980).

Temperamental types:

Maximum patients (64%) of diabetes vis-à-vis *Madhumeha* were of somatotonic nature (Sheldon's classification of human temperament).

Psychosomatic constitution:

Maximum number of patients (68%) were mesomorphic (Sheldon's classification of human physique)

Chronicity of the disease:

The cases in the present study were not much chronic (The advanced complications being excluded in the study).

Types of diabetes:

Maximum number of cases were non-insulin dependent diabetic, N.I.D.D.M. cases being 90%.

Pattern of severity of the disease:

Four grades were formed on the basis of blood sugar level.

Grade – I   - F < 100 mg%
                   PP = 180 – 200 mg%

Grade – II   - F = 100 – 120 mg%
                   PP = 200 – 225 mg%

Grade – III   - F = 120 – 200 mg%
                   PP = 225 – 300 mg%

Grade – IV   - F > 200 mg%
                   PP > 300 mg%

Maximum number of patients were found to belong to Grade III or Grade IV

Variety of disease (As per Jaslin Clinic)

As per Jaslin Clinic Criteria a controlled diabetic is one with:

Blood Sugar Fasting < 110 mg%
Blood Sugar PP (After one hour) < 150 mg%
Blood Sugar PP (After two hours) < 130 mg%

In the 50 cases of the present study, maximum patients were uncontrolled diabetics (90%).

CLINICAL PROFILE IN 50 CASES OF *MADHUMEHA* VIS-VIS DIABETES MELLITUS.

Patients were enquired about the clinical features like polyuria, polydipsia, polyphagia, weakness, cramps on walking, loss of libido, joint pains, weight loss etc. Symptoms like weakness (96%), polyuria (84%) and weight loss (80%) were found with maximum number of patients.

ASSOCIATED ILLNESS / COMPLICATION IN 50 CASES OF *MADHUMEHA* VIS-À-VIS DIABETES MELLITUS.

The frequently observed complications in the patients undergoing the study were hypertension (22%), tuberculosis (18%), U.T.I. (12%), eye problems and neuropathy (10% each) etc.

Following data shows complications in 50 cases of Madhumeha

S. No	Associated illness / Complications	No. of patients	Percentage
1	Hypertension	11	22
2	Tuberculosis	09	18
3	U.T.I	06	12
4	Eye complications	05	10
5	Neuropathy	05	10
6	Gangrene	02	04
7	Hepatitis	02	04
8	Foot ulcer	02	04
9	Arthralgia	02	04
10	Asthma	02	04
11	Miscellaneous	07	14
12	No complications	06	12

Miscellaneous here includes I.H.D : (Ischaemic heart disease) D.U.B.

(dysfunctional uterine bleeding), paraparesis carbuncle, cirrhosis, peptic ulcer and neuropathy.

DOSIK SET UP IN *SAMPARAPATI* OF 50 CASES OF *MADHUMEHA* VIS-À-VIS DIABETES MELLITUS:

Analysing *dosik* setup it was observed that maximum patients had predominance of *Vata* (40%) in the disease state. *Vatakapha* predominance was observed in 30% of the cases.

DUSYA INVOLVEMENT IN *SAMPRAPATI* OF 50 CASES OF *MADHUMEHA* VIS-À-VIS DIABETES MELLITUS:

After analysis ten *Dusya of Prameha,* it was observed that maximum number of patients got *Mamsa* (74%) involvement. More patients were found with *Rasa* (64%), *Meda* (46%) and *Oja* (44%) involved.

MEAN BLOOD SUGAR (FASTING AND PP) OF 50 CASES OF *MADHUMEHA* / DIABETES MELLITUS:

Mean was calculated for fasting and PP blood sugar of 50 cases, which was observed to be 164.12 mg% and 261.66 mg% (PP) respectively.

	Blood Sugar Fasting	Blood Sugar PP
Mean (50)	164.12	261.66
S.D. (50)	± 79.12	± 99.98
S.E. (50)	± 11.19	± 14.14

SUMMARY AND CONCLUSION

A critical review of the ayurvedic literature of *prameha* and its treatment in Ayurveda reveals that the clinicopathological entity of diabetes mellitus which has been conceived in Ayurveda in terms of *prameha / madhumeha* is based on sound scientific footings. To understand the nature of the disease and its *samprapati* in a better way a comprehensive clinical profile of the patients of this region was maintained. 50 patients of non insulin dependent diabetes were randomly selected from Kaya-Chikitsa services of S.S. Hospital, B.H.U. The patients were thoroughly examined and investigated both an ayurvedic and modern lines. The clinical and constitutional profile revealed the following.

(a) There was relatively higher incidence of diabetes in person in *Kaphaj* and *vata kaphaj Deha Prakrti* and *Rajasika Manas Prakrti* mesomorphic body type and somatotonic temperament.

(b) The incidence was higher in persons of middle age, more in males than in females.

(c) Majority of the patients were having uncontrolled diabetes with average duration of illness of 3-4 years and as such they were the most suitable subjects for the clinical study.

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