



## STUDY OF PURVARUPA OF PRAMEHA WITH SELECTED LABORATORY PARAMETERS TO EARLY DIAGNOSIS OF TYPE 2 DIABETES MELLITUS

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### ABSTRACT

Prakarshena prabhutang prachurang baram baram mutrang mehati yasmin roge cha prameha. Excessive, frequent and copious urination is known as prameha. Prameha is the disease which is mentioned in ayurveda since the ages. Though the disease prameha can be considered as urinary disorder, metabolic syndrome and diabetes, but many diabetes has the symptoms nearer to the prameha. In the various ayurvedic classics it is noticed that in the purvarupa of prameha more important is given than the rupas of prameha. Therefore, it is very necessary to observe the purvarupa of prameha to early diagnose of the disease. So, the work has been done over 200 patients to establish a relationship of purvarupa of prameha with the laboratory parameters to detect the type 2 Diabetes Mellitus in its early stage. The early stage of the type 2 diabetes is the stage in which blood glucose is high but not too much high that it can be considered as type 2 diabetes mellitus and this condition is known as prediabetes. The 200 patients were clinically diagnosed for the purvarupa and investigated for the laboratory parameters (Fasting Blood Sugar, Post Prandial Blood Sugar, HBA1C). Finally a conclusion has been done for showing the relationship between purvarupa of prameha and laboratory parameters.

**KEYWORDS :** Prameha, Type 2 Diabetes Mellitus, Prediabetes.

### INTRODUCTION:

"Prakarshenang prabhutang prachurang barang barang mutrang mehati yasmin roge cha prameha". Excessive, frequent and copious urination is known as prameha. There are 20 types of prameha according to the involvement of three dosha vata, pitta and kapha mentioned in the ayurvedic classics, kaphaja prameha are 10 types, pittaja prameha are 6 types of prameha and vataja prameha are 4 types. Before, the manifestation of 20 types of prameha there is manifestation of the purvarupa of prameha which helps in early diagnosis as well as prevention of the disease.

Though prameha is considered as metabolic syndrome, Diabetes and urinary disorder but in this study purvarupa of prameha are considered for early diagnose the disease type 2 diabetes mellitus.

The term Type 2 diabetes mellitus describes a metabolic disorder of multiple aetiology, characterized by chronic hyperglycemia with disturbances of carbohydrate, fats and proteins metabolism resulting from defects in insulin secretion, insulin action or both (WHO). Again prediabetes is the stage used for the individuals whose blood glucose levels do not meet the criteria for diabetes but are too high to be considered normal (ADA). Diabetes mellitus is a fast becoming the epidemic of 21<sup>st</sup> century over the past 30 years. Urban diabetes survey shows that the prevalence of diabetes and prediabetes were 12.1% and 14% respectively. India leads the world's largest number of diabetic subject thus earning the title "the diabetes capital of the world" as per survey of 2013. Unfortunately, 50% of the diabetic subject remain unaware of their diabetic status. Detection of early Type 2 Diabetes mellitus with an ayurvedic approach, observing different clinical presentation in terms of purvarupa of prameha is very necessary to early diagnosis of the disease which will help in prevent the same.

### AIMS AND OBJECTIVES:

To establish a relationship between purvarupa of prameha with laboratory parameters to early diagnosis of type 2 diabetes mellitus.

### MATERIALS AND METHOD:

The study was conducted at Govt. Ayurvedic College and

Hospital, Jalukbari, Guwahati-14, Assam, India under strict protocol to prevent bias and reduce the error in study.

#### a) Sample size

The study was performed in 200 patients presented with the purvarupa of prameha.

#### b) Selection of patients

All the patients were selected randomly from the OPD, IPD and Central laboratory of the Govt. Ayurvedic College and Hospital, Guwahati 14, Assam.

### INCLUSION CRITERIA

1. Patient of both sex male and female.
2. Age of the patient should be more than 30 years.
3. Person having the habit of taking of ahara and vihara mentioned in prameha nidana
4. Obese or overweight person also included
5. Person of high BMI also included.
6. Person who is habituate to smoking and consumption of alcohol are also included
7. Person having the family history of diabetes mellitus.

### EXCLUSION CRITERIA

1. Age of patient should not less than 30 years.
2. Patient having the rupa of prameha
3. Patient of known case of Type 1 Diabetes mellitus, Diabetes Insipids and Gestational Diabetes.
4. Severely ill patient.
5. Patient suffering from AIDS, T.B and HEPATITIS.
6. Patient which are diagnosed as diabetes and patient having the diabetes complications.

### SCREENING CRITERIA FOR PREDIABETES AND TYPE 2 DIABETES MELLITUS:

Usually prediabetes and diabetes mellitus (type 2) is diagnosed with the blood test:

#### A) PREDIABETES

1. FASTING BLOOD SUGAR LEVEL: 110-125 mg /dl (according to WHO criteria) 100-125 mg /dl (according to ADA criteria)
2. POST PRANDIAL BLOOD SUGAR LEVEL: 140-199

mg/dl(according to WHO criteria )140-199 mg/dl(according to ADA criteria)

- HBA<sub>1</sub>C LEVEL: 5.7%-6.4%(according to WHO criteria) 5.7%-6.4%(according to ADA criteria)

**B) TYPE 2 DIABETES MELLITUS (ADA AND WHO CRITERIA)**

- Fasting blood sugar level: >126 mg /dl
- Post prandial blood sugar level: >200 mg/dl
- HBA<sub>1</sub>C level: >6.5%

**PURVARUPA OF PRAMEHA:**

All the classics of ayurveda mentioned various numbers of purvarupa while only two rupas of prameha are mentioned in the classics , so it is clear that purvarupas are given more important. These purvarupas are helpful for the diagnosis of prameha.

Puravarupas<sup>1,2,3</sup> which are mentioned in the ayurvedic classics are given below:

PURVARUPA	Ch.	Su.	A.H.	A.S.	Ma. Ni.
Kesesujatibhava (matting of hair)	+	+	-	+	-
Asyamadhurya (sweetness in mouth)	+	-	+	+	+
Karapadadaha (burning sensation of palms and soles)	+	+	+	+	+
Karapadasuptata (numbness of palms and soles)	+	-	-	-	-
Mukhatalukanthashosa( dryness of mouth , palate and throat)	+	-	+	+	-
Pipasa(thirst)	+	+	-	+	+
Alasya(laziness)	+	-	-	+	-
Kaye Malam	+	-	-	+	-
Kaya chidresuupadeha	+	-	-	+	-
Paridehaangesu (burning of body)	+	-	-	-	-
Suptataangesu(numbness of body)	+	-	-	+	-
Satpadapipilikamutrabhisaranam (attraction of ants towards urine)	+	-	+	+	-
Mutre cha mutradosan (presence of other dosha in mutra)	+	-	-	-	-
Visrashariragandha (smelling of body like fish)	+	+	+	+	-
Sarvakalanidra(sleeping for long time)	+	-	-	+	-
Sarvakalatandra(dozing)	+	+	-	+	-
Snigdhatratra(unctuousness of body)	-	+	-	+	-
Picchila guru gatrata(sliminess and heaviness of body)	-	+	-	-	-
Madhuramutrata(sweet test in urine)	-	+	-	+	-
Shuklamutrata(white colour urine)	-	+	-	+	-
Shavasaanaswapnasukha(sedentary life)	+	+	-	+	-
KeshanakhāAtivridhi(excessive growth of nail and hair)	+	+	+	-	-
Shitapriyata(liking for cold thinks)	+	-	+	+	-
HridayaNetrajihvaSraavanopadeha(feeling of coating over heart, eyes tongue and ear)	-	-	+	-	-
Swedaangagandha(excessive sweating and foul body odour)	+	-	+	+	-
Dehacikkanata(glossiness over the surface of the body)	-	-	-	-	+
Dourgandhyaswasa (foul smelling during expiration)	-	+	-	+	-

**Observation And Result For The Purvarupa Of Prameha And Laboratory Parameters For 200 Patients: Distribution Of Patient According To Purvarupa Of Prameha**

Purvarupa	No. of Patient	Percentage
Sweda	142	71%
Angagandha	71	35.5%
Shashyaasanaswapna sukha	141	70.5
Hrida upadeha	3	1.5%
Netrajihvasravana upadeha	0	0
Ghanaangata	117	58.5%
Keshanakhāativridhi	0	0
Sheetapriyata	53	26.5%
Shithilaangata	121	60.5%
Galatalushosha	152	76%
Madhuryaashyata	121	60.5%
Karapada daha	130	65%
Mutraabhidhavantī pippilikcha	3	1.5%
Dantadinamaladhyanāta	10	5%
Chikonota dehashya	0	0
Angasuptata	126	63%
Gurugatraangata	156	78%
Madhura mutrata	0	0

Shukla mutrata	71	35.5%
Tandra	160	80%
Sada	135	67.5%
Pipasa	154	77%
Durgandha swasa	7	3.5%
Jatilabhava kesheshu	0	0
Nidra	132	66%
Alashya	162	81%
Snigdha picchila gatrata	0	0
Kayemala sidro upadeheshu	0	0
Total	200	100%

**Comment:** The above study shows 162 ( 81 %) patients suffer from alashya , 160(80%) patients suffer from tandra,156(78%) patients suffer from gurugatrata,154 (77% ) patients suffer from pipasa,141(70.5%) patients suffer from sweda,140(70%) patients suffer from shashyaasanaswapnasukha,

**Table 2: Distribution Of 200 Patient According To Fasting Blood Sugar(fbs)**

FBS	No of patient	Percentage	Mean ±SD
<100 mg/dl	24	12%	148.21mg/dl±62.13mg/dl
100-125 mg/dl	66	33%	
>125 mg/dl	110	55%	
Total	200	100%	

**Comment:** The study shows 24 (12%) patients are having FBS < 100 mg / dl, 66 (33%) patients are having FBS 100-125 mg /dl and 110 (55%) patients are having FBS > 125 mg / dl.

**Table 3: Distribution Of 200 Patient According To PPBS**

PPBS	No of patient	Percentage	Mean $\pm$ SD
< 140 mg/dl	24	12%	233mg/dl $\pm$ 98.77mg/dl
140-199 mg/dl	68	34%	
> 200 mg/dl	108	54%	
Total	200	100%	

**Comment:** The study shows that 24 ( 12% ) patients are having PPBS < 140 mg /dl, 68 ( 34%) patients are having PPBS between 140 -199 mg / dl and 108 ( 54%) patients are having PPBS >200 mg /dl.

**Table 4: Dist Ribution Of 200 Patient According To HBA<sub>1</sub>C**

HBA <sub>1</sub> C	No of patient	Percentage	Mean $\pm$ SD
<5.6%	24	12%	6.8% $\pm$ 1.92%
5.7-6.4%	65	32.5%	
>6.5%	111	55.5%	
Total	200	100%	

**Comment:** The study shows that 24 ( 12% ) patients are having HBA<sub>1</sub>C < 5.6, 65 ( 32.5%) patients are having HBA<sub>1</sub>C 5.7% - 6.4% and 111(55.5%) patients are having HBA<sub>1</sub>C more than. 6.5%.

#### CONCLUSION:

From the above study it can be concluded that the person with purvarupa of prameha may have the Fasting blood sugar between 86.08 to 210.34 ,where majority of the patient shows fasting blood sugar >125 mg /dl, Post prandial blood sugar between 134.53 to 332.07 where majority of the patient shows post prandial blood sugar >200 mg/dl and HBA<sub>1</sub>C between 4.88% to 8.72%, where majority of the patient shows HBA<sub>1</sub>C >6.5 % . Therefore, the symptoms which are mentioned as purvarupa of prameha are basically the symptoms of Type 2 diabetes mellitus mentioned in modern medical science. So, purvarupa of prameha is not the stage of prdiabetes rather it is the stage of diabetes. But the purvarupa of prameha along with the investigations will help to diagnose the disease Type 2 diabetes mellitus in its early stage as well as prevent the same.

#### REFERENCES:

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