

DIAGNOSTIC AND PROGNOSTIC UNDERSTANDING OF PRAMEHA / MADHUMEHA WITH URINE EXAMINATIONS

Dr. Rajeev Kumar^{1*}, Dr. Sachin Deva² and Dr. Ketki Aurangabadkar³

¹Final Year P.G Scholar, Dept. of Rog Nidan, Parul Institute of Ayurveda, Parul University, Limda, Tal. Waghodia, Dist. Vadodara – Gujrat, India.

²Reader and H.O.D, Dept.of Rog Nidan, Parul Institute of Ayurved, Parul University, Limda, Tal. Waghodia, Dist. Vadodara – Gujrat, India.

³Assistant Professor, Dept. of Rog Nidan, Parul Institute of Ayurveda, Parul University, Limda, Tal. Waghodia, Dist.Vadodara – Gujrat, India.

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*Corresponding Author

Dr. Rajeev Kumar

Final Year P.G Scholar,
Dept. of Rog Nidan, Parul
Institute of Ayurveda, Parul
University, Limda, Tal.
Waghodia, Dist. Vadodara -
Gujrat, India.

ABSTRACT

Prameha is one of the chirakari vyadhi and included in Ashta Mahagada. Avasthanusara this vyadhi becomes asadhya in nature. Jata Pramehi is always asadhya due to bija dusti. In Ayurveda, there are 20 forms of Prameha due to intraction of the 3 doshas- 4 forms are due to Vata, 6 forms are due to Pitta, 10 forms are due to Kapha. Several of these forms have sweet urine, whereas some of them have different coloration of the urine and indicate the several disorders related to the urinary system like Glucosuria, Proteinuria and Ketonuria by the specific urine test. Diabetes is a group of metabolic disease, Characterized by hyperglycemia resulting from defects in insulin secretion, insulin action or both. Normally, blood glucose level is tightly controlled by Insulin which is produced by the Pancreas. In

patient with diabetes, the absence or insufficient production of insulin causes hyperglycemia. It alters metabolism of carbohydrates, proteins and fat in the body. It is characterized by high level of blood glucose and subsequent excretions through urine. Here further in this article Diagnostic & Prognostic understanding of *Prameha/Madhumeha* with Urine examinations will be highlighted.

KEYWORDS: *Prameha/Madhumeha*, Diabetes Mellitus, Urine Examinations, Glucose, Protein, Ketones.

INTRODUCTION

Sarva ev pramehastu kalena apratikarinaha |

Madhumehatvamanyanti tada asadhya bhavanti hi || (Su.Ni-6/27)

Acharya Sushruta considered it under one among the Eight grave diseases.

Prameha roga refers to a set of urinary disorders, even though urinary system is directly involved in this disease.

Signs and symptoms of *Prameha* & Diabetes Mellitus which are described in Ayurveda and Modern Science are Prabhurutmutrata (increased quantity of urine), Aavilmutrata (turbid urine), Atipipasa (Increased thirst), Atikshuda (Increased hunger).

In the 21st century, because of invention of new technology, man's life become more mechanical and having less effort to do anything. There is increasing stress and strain which leads to various physical, psychological disorders and various diseases like Hypertension, Arthritis, Cardiac disease and most harmful Diabetes Mellitus.

According to the modern science 2 types of Diabetes are referred as: Type 1DM (Insulin Dependent Diabetes Mellitus -IDDM) or Juvenile Diabetes, Type 2DM (Non Insulin Dependent Diabetes Mellitus -NIDDM) or Adult onset Diabetes. Other types of Diabetes are: Gestational Diabetes, LADA (Latent Autoimmune Diabetes of Adults), MRDM (Malnutrition Related Diabetes Mellitus), Congenital Diabetes & Steroid Diabetes. Symptoms of high blood sugar include frequent urination, increased thirst, increased hunger & loss of weight.

AIM AND OBJECTIVES

To find out the Diagnostic & Prognostic understanding of *Prameha/Madhumeha* with urine examinations.

To analyse the relation between *Prameha/Madhumeha* and urine examinations.

MATERIALS AND METHODS

Charak samhita, *Sushrut samhita*, *Madhav nidan*, Harrison's Principles of Internal Medicine, Davidson's Principle and Practice of Medicine, Harsh Mohan's Textbook of Pathology and practical book, Google.com etc are referred for collection and compilation of *Prameha/Madhumeha* with urine examinations.

DISCUSSION

We can understand the stages of Prameha / Diabetes Mellitus by Urine Test

There are 3 main steps which are helpful to make provisional diagnosis along with prognosis of Prameha/Diabetes Mellitus by Urine examinations. **1- Glycosuria / Glucosuria 2- Proteinuria / Albuminuria 3- Ketonuria**

We can confirm Glucose is present in Urine or not

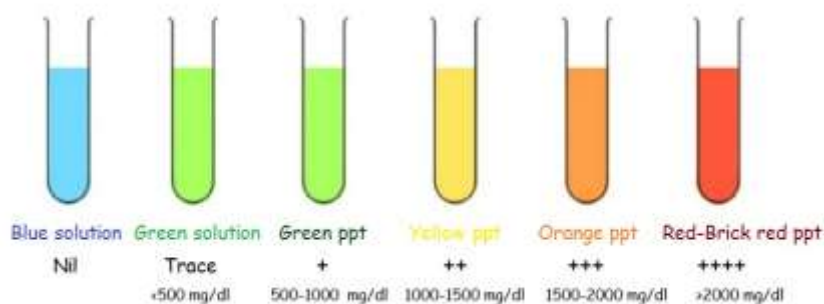
Glucose is by far the most important of the sugar which may appear in urine. Normally approximately 130 mg of glucose per 24 hrs is passed in urine which is undetectable by test. Chemically detectable glucose in urine is called as Glycosuria. Glucose in the urine can be a sign of abnormally high Blood Sugar Levels.

Ayurvedic review

MUTRE ABHIDHAVANTI PIPILIKASH (Ch. Chi - 6/14)

ATYARTHA MADHURAM... (Ch.Ni – 4/14)

Benedicts Test.



We can confirm Albumin is present in Urine or not

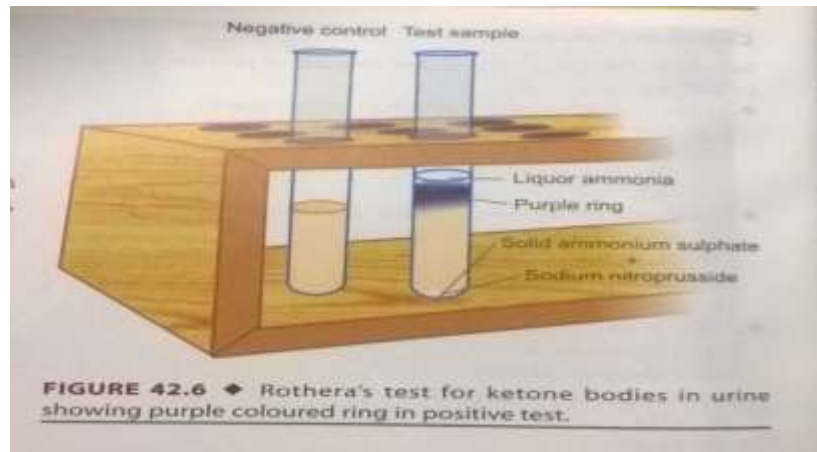
When excess Protein/Albumin is present in urine, it is called as Albuminuria/Proteinuria. Normally there is a very scanty amount of Protein in urine (<math>< 150 \text{ mg/dl}</math>). If turbidity or precipitation disappears on addition of Acetic acid, it is due to Phosphates, if it persists after addition of acetic acid then it is due to Proteins.

Ayurvedic review

PRABHUT AVILMUTRATA... (Ma.Ni – 33/6)

We can confirm Ketones are present in Urine or not

Ketones are found in urine when there is excessive Fat Metabolism (these are products of incomplete fat metabolism) and these excess Ketone is excreted through urine. If appearance of purple coloured ring at junction indicates presence of ketone bodies.

Ayurvedic review**VASAMEHI VASAMISHRAM VASABHAM MUTRAYEN MUHU (Ma.Ni -33/15)****ACHIKITSYA BHAVANTAYETE BALAMAMSA KSHAYA SA ETI (Ch.I. 9/9)**

It is very clearly mentioned by Charaka while explaining the Vishesh Samprapti of Vataja Prameha that all the dhatus are excreted out of the Shareera in mootramarga which will cause the individual to become krusha indirectly making him prone for other diseases due to reduced Vyadhikshamatva. (Ch.Ni-4/4 & 5)

Clinical Applications of Glucose, Albumin & Ketones with Sadhya Asadhyatva**1. Glucose**

Glycosuria indicates: Diabetes, Renal Glycosuria, Severe Burns, Severe Sepsis, Administration of Corticosteroids, Pregnancy. Glycosuria also helps in contributing for the diagnosis of Prameha / Diabetes.

2. Protein

Clinically it is depending upon amount of Protein the results are interpreted as below:

No cloudiness: Negative

Cloudiness against dark background: Trace(< 0.1 g/dl) –*Sadhya*

Cloudiness without granularity: + (0.1 g/dl) –*Sadhya*

Granular cloudiness: ++ (0.1 – 0.2 g/dl) –*Kashta Sadhya*

Precipitation and flocculation: +++(0.2–0.4 g/dl) –*Kashta Sadhya*

Thick solid precipitation: ++++ (0.5 g/dl) –*Asadhya*

Heavy Proteinuria are indicated (>3gm/dl)

Nephrotic Syndrome, Renal Vein Thrombosis, DM.

Moderate Proteinuria are indicated (1-3 gm/dl)

Chronic Glomerulonephritis, Nephrosclerosis, Multiple Myeloma, Pyelonephritis.

Mild Proteinuria are indicated (<1gm/dl)

Hypertension, Polycystic Kidney, Chronic Pyelonephritis, UTI, Fever.

3. Ketone**Ketonuria are indicated**

Diabetes Ketoacidosis, Dehydration, Hyperemesis Gravidarum, Fever, Cachexia Starvation, Low Carbohydrate diet, Anorexia, After general anaesthesia.

CONCLUSIONS

The ancient Ayurvedic knowledge regarding *Prameha* can be utilized to expand the current understanding of Diabetes Mellitus.

Excretion of large amount of vitiated urine (turbid or unctuous) with deranged colour is the main feature of this illness.

Frequent urge to pass urine (which may be excessive or scanty) is the cardinal feature of *Prameha*.

Glycosuria helps in contributing for the diagnosis of *Prameha* along with RBS, FBS etc.

Proteinuria & Ketonuria both helps to understand the prognosis of *Prameha / Madhumeha*.

This clearly indicates the utility of modern investigations and equipments in understanding the disease progress which will be beneficial in early diagnosis, better management and also preventing from complications.

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