

URINE SUGAR ANALYSIS BY MODERN AND AYURVEDIC CONCEPT – A LITERARY REVIEW

Apurwa N. Pawar^{1*} and Archana Gharge²

¹PG Scholar, ²Professor & HOD

Rognidan Evum Vikruti Vigyan Department, YMT Ayurved College, Kharghar,
Navi Mumbai Maharashtra.

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*Corresponding Author

Dr. Apurwa N. Pawar

PG Scholar Rognidan Evum
Vikruti Vigyan Department,
YMT Ayurved College,
Kharghar, Navi Mumbai
Maharashtra.

ABSTRACT

As per modern aspect urine sugar level can be checked by chemical examination i.e pathological investigation, like that in ayurveda also we can detect urine sugar through anumana Pramana. Madhumeha is one of the type of prameha in that case with the help of anumana pramana pipilika attracts towards the urine due to it's madhur ras.

KEYWORDS: Madhumeha, Diabetis Mellitus, Glycosuria, Urinary Glucose.

INTRODUCTION

Urine sugar testing was established as a clinical laboratory procedure during the 19th century. A glucose in urine test measures the amount of glucose in urine. Glucose is the type of sugar. It is our body's main source of energy. A hormone called insulin helps move glucose from our blood stream into our cells. If too much glucose gets into the blood

the extra glucose will be eliminated through our urine. A urine glucose test can be used to help determine if blood glucose level are too high, which may be sign of diabetes.

AIM AND OBJECTIVE

Ayurvedic interpretation of urine sugar analysis.

MATERIAL AND METHODS

The present narrative review is mainly focused on urine glucose test with the help of benedict's reagent as a comparative study with ayurvedic aspects of anumana pariksha is one

of the trividha pariksha. Which is best described in charak samhita, sushrut samhita also mentioned in vaghbhat samhita.

DICUSSION

Purpose: Urine sugar test by modern science

- 1) Screening to detect diabetes
- 2) Confirmation diagnosis of diabetes
- 3) Monitoring the effectiveness of diabetes

Benedict's reagent method

Step 1- Take 5 ml Benedict's reagent in glass test tube.

Step 2 - Add 8 drops of urine in that glass tube.

Step 3 - Shake boil the mixture.

If colour is change – Sugar present

If colour is no change – Sugar absent

Blue	No Sugar
Green liquid without deposit	+1% Sugar
Green liquid with yellow deposit	++2% Sugar
Colourless liquid with orange deposit	+++3% Sugar
Brick Red	++++4% Sugar

Odour

Normal - Aromatic due to the volatile fatty acid

Sweet - Diabetes

• Ayurvedic interpretation of urine sugar

According to ayurveda There are three types of prameha i.e.

- 1) Vataj
- 2) Pittaj
- 3) Kaphaj

• Samprapti of prameha according to charak

कफः सपित्तः पवनश्च दोषा मेदोऽस्रशुक्राम्बुवसालसीकाः।

मज्जा रसोजः पिशितं च दूष्याः [१] प्रमेहिणां, विंशतिरेव मेहाः॥(ch.chi 6/8)

Improperly processed vata, pitta & kapha mixes with dushya i.e. medas, rakta, shukra,

ambu, vasa, lasika, majja, rasa, ojas & Mamsa in Mutravaha srotas leading to manifestation of twenty type of prameha.

Udbhavsthan – pancreas

Sancharsthan – Medovaha srotas

Vyaktsthan – Basti

मेदश्च मांसं च शरीरजं च क्लेदं कफो बस्तिगतं प्रदूष्य।

करोति मेहान् समुदीर्णमुष्णेस्तानेव पित्तं परिदूष्य चापि॥(ch.chi 6/4)

- Meddhatu, mansadhatu & kleda (Situated in Basti) contaminated by provoked kapha creates various type of prameha.

• Ayurvedic aspect of physiology of urine in sugar

Dosha, Dhātu & Mala they are responsible for maintenance of health in balanced state Any changes of this i.e. vridhi or kshay it makes disease condition in body. Kleda is described in classic of bhava padarth or representations of jala mahabhut in the body whenever the normal liquid portion increased in dhatus as a result of metabolism in some pathological condition it is eliminated by mootra sweda also help in elimination but it is mainly done by mutra as its main function. When vikrut kleda affect the meda & reaches towards the basti it will produce prameha as well as result in. Acharya charak explained that the roughness of aggravated vatadosha transforms the sweet taste of ojas into astringent taste and expels out along with the urine thus causing madhumeha. Urine mixed sweet taste, pale colour and unctuousness are the feature of this condition.

• Prameha samanya lakshan

तत्राविलप्रभूतमूत्रलक्षणाः सर्व एव प्रमेहा भवन्ति ॥(su.Ni.6/6)

- Excessive urine is the main lakshan including in all types of prameha.

Ayurveda has grouped Madhumeha under one of the 20 prameha urinary disorder. Madhumeha is considered primarily a vata disorder with kapha & pitta secondary.

• Madhumeha lakshan

कषायमधुरं पाण्डु रूक्षं मेहति यो नरः।

वातकोपादसाध्यं तं प्रतीयान्मधुमेहिनम्॥ (ch.Ni.(4/44)

- Patient of Madhumeha passes urine having sweet taste and smell, pale and ununctuous and it is incurable

- **Symptoms as per ayurveda**

- Prabhuta mutrata
- Avilmutrata
- Malinmutrata

- **Symptoms as per modern science**

- Fatigue
- Polyurea
- Persistent infection
- Polyphagia
- Polydipsia

- **Purvarupa of prameha**

शीतप्रियत्वं गलतालुशोषो माधुर्यमास्ये करपाददाहः।

भविष्यतो मेहगदस्य रूपं मूत्रेऽभिधावन्ति पिपीलिकाश्च॥(ch.chi 6/14)

- Pipilika attracts towards the urine due to its sweetness.

- **According to ayurveda Mutra Gandh, Varna, Rasparikshan in prameha**

- 1) Gandh - Madhura gandh
- 2) Varna - Colour of urine pale and ununctuous having sweet and astringent taste.
- 3) Rasparikshan - रसनेन्द्रिय विज्ञेया प्रमेहादिषु रस विशेषाः ॥(su.su3/8)

- By inference one can ascertain the vitiation in rasnendriya for example; If bees flies attracted towards the prameha patient, it indicates tanumadhuryata of prameha rogi.

CONCLUSION

Prameha is kaphapradhan santarpajanya vyadhi which is caused due to visheshan of kaphadosha by its dravaguna. Kledanirmiti is important step in etiopathogenesis of prameha. The function of mutra is a kledvahan & ustarjana. The excessive kleda (sugar) produced in prameha is excreted through urine which makes its avil (malin) resulting into glycosuria.

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