

AN OBSERVATIONAL STUDY TO EVALUATE THE STATUS OF JATHRAGNI IN MADHUMEHA (DIABETES MELLITUS) – A SURVEY STUDY

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Abstract

The term Agni generally means fire which participates in the course of digestion and metabolism in human body. According to Acharya Charaka, the Ayu (life), Varna (colour), Bala (strength), Swasthya (health), Utsaha (enthusiasm), Upachaya (growth and development of body), Prabha (lustre), Oja (vitality), Teja (vigor) & Prana (vitae) of the body, are depend upon Agni. The cessation of Agni & the disorders of Agni in the body cause death & diseases respectively. Thus Agni is considered as the root cause of any disease. According to Acharya Sushrutha, the balanced state of Agni in the body is also called health. There are 13 types of Agni present in the body. Jatharagni, Bhutagni, Dhatwagni, Jatharagni is the primary and most important Agni among these 13 types of Agni Madhumeha is one among the Asta maha roga and Vataja Prameha and one among 20 obstinate urinary disorder mentioned by Acharya Charaka. Since this disease is connected with the Urinary system with the presence of sugar content in the urine, the comparison of Madhumeha with Diabetes Mellitus is justifiable. The purpose of this study is to evaluate whether any impairment of Agni in Madhumeha. We conduct a survey study in patients of Madhumeha to evaluate the impairment of Agni. Hence in this study we got 45% of Samagni and 55% of impaired Agni.

Keywords: Agni; Madhumeha; Diabetes Mellitus; Teekshnagni; Mandagni; Vishamagni.

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INTRODUCTION

Health is a state of complete physical, mental, spiritual & social wellbeing. Ayurveda is the science of complete health. Main objective of Ayurveda is to maintain the health of healthy person and to cure the diseased one.^[1] Agni is one of the basic concept, which provides fundamental knowledge in understanding the theories of Ayurveda viz. Aharapachana (digestion of food), Dhatu Utpatti (formation of tissue), Vyadhi Utpatti (formation of disease), it is also said to be an important Tatva (element) of the universe.^[2]

Agni is believed to be as important as catalyst in the process of transformation. The fact of transformation occurs to the minutest level of cellular functions. These transformations include bio chemical or bio physical changes, due to which, body grows, develops and lastly destroys too. So, life is nothing but a constant process of transformations. The principle vitality of Agni can be understood by understanding the changes that occur during transformations. According to Ayurvedic principles, all these process cannot be possible without Agni.^[3]

Jatharagni is the chief among all types of Agni's because functions of Bhutagni and Dhatvagni depend on this.^[4] Aggravation or diminution of Jatharagni results in aggravation or diminution of Bhutagni and Dhatvagni. Therefore by all means one has to protect Jatharagni by consuming suitable wholesome dietetics and behavior because longevity and strength depends on normal state of Agni. On the contrary one, who consumes unwholesome diet due to greed, succumbs to disease caused by the vitiation of Grahani (small intestine). Grahani dosha refers to diseases located in Grahani. This manifests due to malfunctioning of the Grahani. Irregular digestion and metabolism causes imbalance in Dhatus. The intense digestion and metabolism and less consumption of food leads to depletion of Dhatus.

Ayurvedic classics describe 13 types of Agni according to their locations and functions of transformation at different levels of digestion and metabolism. i.e. Jatharagni, Bhutagni, Dhatvagni, On the basis of Jatharagni Bala it is classified into 4 types Teekshnagni (sharp digestive fire), Mandhagni (mild digestive fire), Samagni (regular digestive fire), Vishmagagni (irregular digestive fire).^[5]

Ayurveda describes about Madhumeha which can be co-related to Diabetes mellitus. Word Madhumeha refers to Honey like or saccharine urine, main cause of it is due to sedentary lifestyle viz. Asyasukha (desire to be lazy), Swapnasukha (day sleep or excessive sleep), engaging in activities which increases the Dushta Kapha (vitiated kapha) and Medas (fat). In this pathological state the body's transformation occurs with increased production of Kapha and Medas which impairs the normal metabolism. Acharyas mentioned the detailed description of disease thousands of years ago. Madhumeha is said to be subtype of Vatika Prameha. Charakacharya has described the main cause of disease as Beeja dushti (defect in genetic substance) and further stated that it is difficult to cure due to great chances of recurrence and a lot of complications. The main factors involved in the pathogenesis are Vata, Pitta, Kapha, Meda and Oja.

Madhumeha is one among the Asthamaharoga,^[6] Vataja Prameha,^[7] 20 obstinate urinary disorder mentioned by Charakacharya. It is familiar since Daivika Yuga where we get detailed description about this disease. Since this disease is connected with the Urinary system with the presence of sugar content in the urine, the comparison of Madhumeha with Diabetes Mellitus is justifiable.

Previously a disease of middle aged and elderly, Diabetes mellitus has escalated in all age groups and is now being seen in younger age groups also including adolescents,

especially in high risk population. In addition to the undisputed strong genetic predisposition of Diabetes mellitus, studies have also revealed the influence of the interaction of host factors like age, sex, family history, obesity and environmental factors like sedentary life style, dietary pattern, socioeconomic status and habits like alcoholism and smoking. Identification of these relevant and avoidable risk factors will help in primordial prevention of disease. Management of Diabetes is one of the most troublesome job faced by the clinicians. Also, Diabetes being an iceberg disease, it makes management of other accompanying disease complex job. Cases with impaired Glucose Tolerance and Insulin Resistant are very common these days. Oral Hypoglycemic drugs have their own limitations.

Health is defined as the balanced state of Dosh, proper stage of Agni, balanced state of Dhatu, Mala and Dhatu Parinama along with happy and balanced state of Atma, Indriya and Manas.^[8]

Factors like life, complexion, strength, health, metabolic process, growth development, Ojas, and Tejas and even Prana are due to Agni. When the digestive fire is completely lost person dies. It is the cause why Agni is described as root of life.^[9] Agni helps in the digestion of food located in the Ashaya (stomach) for the production of Rasa and Mala.^[10] Four states of Agni are Vishama, Tikshna, Manda, and Sama Agni.^[11] In the examination of patients one should examine Agni (digestive fire), Prakruti (body constitution), Bala (strength), Desa (place), Vaya (age), Kala (time), Satva (mind), Satmya (similarities) etc of the person.^[12]

Blood glucose is tightly regulated and maintained within a narrow range. A balance is preserved between the entry of glucose into the circulation from the liver supplemented by intestinal absorption after meals, and glucose

uptake by peripheral tissues particularly skeletal muscles. Insulin secretion from pancreatic beta cell plays an essential role in blood glucose homeostasis and type – 2 diabetes.^[13]

MATERIAL AND METHODS

Source of data

Known case of Madhumeha Patients approaching in OPD and IPD were taken for study after getting permission from Institutional Ethical Committee. [IEC No.: SDM/IEC/23/2017-2018]

Method of collection of data

Apparently 300 subjects known case of *Madhumeha* of age between 30-70 years and Known Case of Diabetes mellitus with duration of more than five years were selected. And Status of *Jatharagni* were Assessed by questioner method.

Inclusion criteria

- Age group of 30 to 70 years.
- Irrespective of gender, caste, religion and socio-economic status.
- BMI (25 to 30).
- Fasting Blood Sugar level & Post Prandial Blood Sugar Level
- Known Case of Diabetes mellitus with duration of more than five years.

Exclusion criteria

- Those individuals who were suffering from acute and chronic illness.
- Subject suffering with Gestational diabetes and Diabetes insipidus.
- Congenital anomalies.
- Not ready to sign informed consent form.

Table 1: Agni of the subject

| Type of Agni | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------|------------|--------------|---------------|--------------------|
| Vishamagni | 79 | 26.3 | 26.3 | 26.3 |
| Teekshagni | 52 | 17.3 | 17.3 | 43.7 |
| Mandagni | 36 | 12.0 | 12.0 | 55.7 |
| Samagni | 133 | 44.3 | 44.3 | 100.0 |
| Total | 300 | 100.0 | 100.0 | |

Plan for the study

Standard questionnaire (H.T. Eswaran et al.) was used to assess the status of Jatharagni in 300 patients of known case of Madhumeha.

OBSERVATIONS AND RESULTS

Among total 300 subjects, 44.3% subjects were having Samagni. This may be due to the influence of all the three doshas equally on the jatharagni leading to state of samagni status. It may be also due to the influence of Medicines ingested and following proper diet habits.

According to the study 45% of individuals having samagni. 55% of individual having impaired agni (vishmagni - 26%, teekshagni - 17%, mandagni - 12%). (Table 1)

DISCUSSION

Among total 300 subjects, 44.3% subjects were having Samagni. This may be due to the influence of all the three Doshas equally on the Jatharagni leading to state of Samagni status. It may be also due to the influence of Medicines ingested and following proper diet habits. So the study between the status of jatharagni in relation to Madhumeha is being constant i.e Samagni. Most of the questions answered by the subjects were having an association with the Lakshana's after Ahara Paka like Sristavinmutra (polyuria), purisha (feces), udgaarashuddhi (clear belching) etc.

So it states that Aharapakakramaupto the level of Pachakagnii.ejatharagni is affected, so there is a status of jatharagni in Madhumeha.

If in impairment of the Bhutagni or Dhatwagni respectively will have impact in causing Madhumeha because, as it affects more to the Dravarupikapha which lodges in the basthiPradesha leading to the lakshana called Prabhutamutra.

The impaired Bhutagni or bhutagni at its normal function it does the assimilation of particular mahabhuta for specific Dhatu formation but, due to excessive dravashoshana it lacks in ApaMahabhuta. So nourishment of Dhatu's in further, that is Rasa, Raktha, and Medha will not occur properly or May be form Ama in them which cause Less Kshudha and aruchi.

Agni in its normal state does the function of Dahana, Paka, and ushnatwa so in case of subjects with impaired ApaMahabhuta ends up in production of more ushnata from the jatharagni and when it reaches upto the level of Hasta and Pada will cause hastapadadaha. Due to Nidanarthkaraahara and vihara it will increase the Kapha and Medas which cause excessive Gauravata and Alasya.

So it can be stated by the observation that there is impairment in the status of jatharagni but the extent at which other Agni i.e bhutagni and dhatwagni affects so the symptoms of Madhumeha is observed. There's no theory to prove the extent of Bhutagni or Dhatwagni affected.

CONCLUSION

- This study shows that there is a statistical difference between status of Agni in Madumeha patients (diabetes patients).
- The study shows 45% of individuals have *Samagni*
- 55% of individual have impaired *Agni*(vishmagni-26%,teekshagni-17%,mandagni-12%,).
- So we can conclude that impaired Agni (improper digestive fire) have an influence to cause diabetes mellitus.

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