

CRITICAL LITERATURE REVIEW ON *DOSHA-DHATU-MALA* IN *PRAMEHA* W.S.R TO  
*KRIYA SHARIR*

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**ABSTRACT**

*Prameha* is one of the leading and progressive diseases found in India. It is a very complex disease in which there are many *dushyas* i.e. *vata*, *pitta*, *kapha*, *meda*, *mamsa* (muscle), *kleda* (body fluid), *shukra* (semen), *shonit* (blood), *vasa* (fat), *majja* (bone marrow), *lasika*, *rasa*, *ojas*. Where *Kapha* is the dominant *Dosha* and *Meda* is common *Dushya* in all *prameha* *samprapti*. As it is disease related to metabolism it suggests that there is defect in the *Agni* (*Agnimandya*). Its disease featured as increased quantity (*Prabhut*) and turbidity (*Aavil*) of Urine. While describing the causative factors, used the term '*Kaphakrut cha sarvam*' in it. Due to heavy fatty diet and sedentary lifestyle, there is quantitative increase in *Dravatva* of *Kapha* due to the elimination of excessive *kleda* with *urine*. Turbidity in urine is due to presence of *dosha* and *dushyas* in the urine- '*Bahu drava shleshama dosha vishesha*'. So in this article we study the role of *Dosha* – *Dushya* which are involved in the *samprapti* of *Prameha*.

**KEYWORDS:** *Dosha*-*Dushya*, *Kapha*, *Meda*, *Prameha*, Urine.

**INTRODUCTION**

*Prameha* is the condition in which there is increased quantity of urine due to excess *kleda* elimination and changes in turbidity of urine is occurred. Turbidity in urine is due to presence of *dosha* and *dushyas* in the urine- '*Bahu drava shleshama dosha vishesha*'.<sup>[1]</sup> Diabetes is derived from word '*Diabainein*' to mean 'cross through a siphon' that means elimination of large quantity urine same in Ayurveda *Prameha* is a disorder with increased quantity of urine. Mellitus means Honey, passing in large quantity of sweet urine. Diabetes mellitus is considered as Metabolic syndrome in which there is impairment of carbohydrate, Protein and Fat metabolism, in DM- Hyper-insulinaemia & Normal insulin may be found. Ayurveda also considered it as metabolic disorder in respect to *Agni*.

*Prameha* is one of the leading and progressive diseases found in India. It is a very complex disease in which there are many *dushyas* i.e. *vata*, *pitta*, *kapha*, *meda*, *mamsa* (muscle), *kleda* (body fluid), *shukra* (semen), *shonit* (blood), *vasa* (fat), *majja* (bone marrow), *lasika*, *rasa*, *ojas*.<sup>[2,3]</sup> While describing the causative factors, used the term '*Kaphakrut cha sarvam*' in it. It causes vitiation of the *dushya* having same characteristics of *Kapha* eg. *Meda*, *Mamsa*, *Rasa*, *Vasa*, *Lasika* etc.

**Classification**

*Acharya charaka* classified *Madhumeha* in two groups as *Sahaj* & *apathyanimittaja*. *Sahajprameha* is due to *beeja dosha* or *beejabhagavayav dushti* and can be compared as type 1 diabetes or IDDM. And *Apathyanimittaja* is occurred due to improper dietary habits and faulty lifestyle it can be compared as type 2 Diabetes or NIDDM.

**(A) Dosha**

All *Acharya* had been mentioned that *Prameha* is *Tridoshaja Vyadhi*. Hence the three *doshas* are responsible in producing *prameha*. The specific role of *Dosha* in the pathogenesis of *Prameha* is as follows:

**(i) Kapha**

*Kapha* is the dominant *dosha* in the *Prameha* *samprapti*. *Charakacharya* said that persons having more *Kapha Dosha* in body are susceptible to *Prameha*, while describing the causative factors used the term '*Kaphakrut cha sarvam*' in it.<sup>[1]</sup> The first step in pathogenesis is vitiation and *Dushti* of *Kapha*. It causes vitiation of the *dushya* having same characteristics e. g. *Meda*, *Mamsa*, *Rasa*, *Vasa*, *Lasika* etc. *Shithilangata* is the result of *bahudrava kapha*. Other symptoms which are produced due to *Kapha* are *Aasyamadhurya*, *Aalasya*,

*Shithilangata, Gaurava, Nidra, Tandra, Jatilibhava kesheshu, Madhura and Shuklamutrata.* etc.

### (ii) Pitta

*Pitta* is the second important *Dosha* involved in the Pathogenesis. *Pitta* is vitiated after the *Kapha* in *Apathynimittaja Prameha*. Both *Kapha* and *Pitta* are causes of *Aavarana* of *Vata*. *Pitta* is responsible for rapid generation of the disease. There is *Ashrayashrayi Bhava* of *Rakta, Lasika, and Sweda* with *Pitta Dosha*. These are the *Dushyas* in *Prameha* which get vitiated due to *Pitta*. The symptoms which are produced due to *Pitta* are: *Pipasa, Kshudhadhikya, Paridaha, Hastapadatala daha, Visrashariragandha, Sweda- daurgandhya* etc.

### (iii) Vata

*Vata* is controlling all the major life activities, at the same time it is a controlling power on *kapha* and *pitta*. It is also having *gatimatwa* and *yogvahi* properties. *Vata* gets aggravated by 2 ways, by *Nidanasevan* causing *Vataprakopa* and due to *Aavarana* of *Vata* by *Kapha* and *Pitta*. *Vata* causes depletion of vital constituents of the body like *Vasa, Majja, Lasika* and *Oja*. And leads them to *Mutrashaya*, thereby excreting them in urine. The *Pramehas* generated by *Vata* are rapid and more serious than the other two *Dosha*, as *Vata* gets vitiated rapidly. *Oja* which is the essence of all *Dhatu*s is depleted due to *Ruksha guna* of *Vata*, therefore *Vataja Prameha* are incurable. *Aavarana* causes obstruction of normal *Gati* of *Vata*, therefore it attacks on the normal and vital constituents. The symptoms which are produced due to *Vata* are: *Angasada, Karapadasuptata, Shosha, Karshya* etc.

### Role of Vyana and Apana

Acharya Sushruta described that *vyana* and *apana* are the main culprits in *prameha*.<sup>[4]</sup> *Vyana* has its seat all over the body and *Apana* has its seat in *Vankshana* etc. Thus in all *prameha* *samprapties* *vyana* acts as the collector of *kleda* and *apana* as excretor. The provoked *vata* carries the *dushyas* like *vasa, majja* and *oja* towards *Basti* and excretes through urine. Again the excretion of *dushyas* exaggerates *vata* provocation and hence the vicious cycle goes on.

### (B) Dushya

**Rasa:** *Rasa* possesses same quality as that of *Kapha* and it is also *Mala* (waste product) of *Kapha*. According to all *Acharya, Rasa* is the first *Dhatu* in the body. And other *Dhatu* of the body are nourished by *Rasadhatu*. So vitiation of *kapha* is the result of vitiation of *rasadhatu*. The symptoms which are produced due to *Rasa* are: *Sthaulya, Karshya, Gaurava, Hrullasa, Tandra, Aalasya, Srotorodha* etc.

**Rakta:** *Rakta* is *Ashrayi Dhatu* of *Pitta*. Therefore when *Pitta* gets vitiated there is vitiation of *Vata* also. *Rakta* can be considered as the normal blood circulation all over the body. Therefore in *Raktadushti*, cellular utilization of glucose may be disturbed due to defect in

vascular system. The symptoms which are produced due to *Rakta* are: *Vidradhi, pidaka* etc.

**Mamsa:** *Mamsadhatu* composes the muscular structure of the body. It has same characteristics as that of *Kapha*. So, it also gets easily vitiated by the *Nidana* of *Prameha*. In *Prameha* there is laxity of the body due to looseness of muscles and *Karshya* due to atrophy of muscles. The muscular strength may also be reduced. The symptoms produced due to *Mamsa* are: *Putimamsa-pidaka, Shithilangata*.

**Meda:** It is the dominant *dushya* in all types of *pramehas*. Again *Kapha* and *Meda* are of same *Guna*. The characteristic described for *Meda* in *Prameha* is *Bahu-abaddha*. *Sharira shaithilya* is produced by *abaddha meda* and *bahutwa* of *meda* leads to *dhatwagnimandya*. *Dhatwagnimandya* leads to *medovridhi* in turn. All the ingested food material gets converted into *meda* and other *dhatu*s remain under nourished. The symptoms which are produced due to *Meda* are: *Atikshudha, Atitrushna, Daurgandhya, Swedadhikya* etc.

**Majja:** *Kshaya* of *Majjadhatu* is seen mainly in *Vataja Prameha*. It may suggest involvement of the nervous system. Therefore the symptoms peripheral neuritis, burning sensation etc. are seen. The symptoms which are produced due to *Majja* are: *Murchchha, Angagaurava, Netragaurava*.

**Shukra:** *Shukra* i.e. *pumbeeja* is having an important role in *sahaja prameha*. *Prameha* is a *kulaja vikara* and occurs as result of *Beeja dosha*. *Shukra Dhatu* is responsible for reproduction. Therefore vitiation of *Shukra* leads to sex debility and impotency in the patient of *Prameha*. *Sushruta* has also mentioned that *Vyana & Apana* are the causative factors for *Shukra dosha & Prameha*. *Vata* causes depletion of *Shukra dhatu* and causes *Shukrameha*.

**Kleda:** *Kleda* itself is an important *dushya* in *prameha*. It makes other *dushyas* susceptible for the progression of the *samprapti*. *Kleda* establishes the *abaddhatwa* in the *dhatu*s which establishes *sharira shaithilya*. *Kleda* promotes analogy between *dosha* and *dushya*. The increased *kleda* has the similarity with *Bahudrava Shleshma* and *Bahu abaddha meda*. Thus it causes amalgamation of provoked *doshas* with susceptible *dushyas*. This provoked *vata* carries *oja* towards *basti* resulting in *madhumeha*. When *dosha dushya* gets mixed with the *kleda*, it gets converted into *mutra* excreted and results in *Bahumutrata* (increased frequency) and *Aavilamutrata* (altered transparency).

**Vasa:** *Vasa* is *upadhatu* of *mamsa*. *Sushruta* has described *vasa* as *dushya* in *vataja prameha*. *Vasameha* is one type of *vataja prameha*. It is described as *Sneha* of *Shuddha Mamsa* by *Sushruta*.

**Lasika:** Lasika is one type of fluid. The dushti of Lasika is described in Hastimeha. It is the fluid situated in between *Mamsa* and *Twak* i.e. tissue fluid. The symptoms which are produced due to *Lasika* are *Swedadhikya*, *Pichchhilamutrata* etc.

**Sweda:** Sweda has been described as dushya by Vagbhatta. Atisweda and visra sharirgandha occurs as a result of sweda dushti.

### (C) Mala and prameha

In *Ayurveda* there are three types of *Mala* which are *Mutra*, *Purisha*, *Sweda*. The function of *Mutra* is *Kledavahanam* and *Bastipurana*. In *Prameha*, the normal function of *Mutra* get disturbed and it excretes excessive *Kleda* from urine. Due to *Mutravikruti*, symptoms of *Mutravrudhhi* are also seen in *Prameha*. Archarya *Shushruta* in *Nidanastana* briefly explained the Ayurvedic concept of *Mutranirmana Prakriya* which starts from *Pakwashaya* by the process of *Nisyandana*. *Avasthamba* is the function of *Purisha*. In *Prameha* there is *Vikruti* of *Purisha*. *Atisara* (loose motions) seen in the *Pittaja Prameha* and *Badhapurisha* (constipation) seen in the *Vataja Prameha*. *Kledavidhruti* is the function of *Sweda*. Symptoms of *Swedovridhhi* are seen in *Prameha* like *Atisweda* (excessive sweating), *Dourgandhya* (foul odor) and *Kandu* (itching).

### (D) Agni & Ama

Acharya *Gananath Sen* termed the disease *Madhumeha* as *Dhatvagni vikruti janya*. Agni is responsible for all normal functioning of the body (physiology). Therefore if the Agni is disturbed there are disturbances in the physiological functions and consequently diseases are manifested. The growth or depletion of any body tissue is dependent on the function of Agni.<sup>[5,6]</sup> According to *Sushruta*, *Samprapti* of *Prameha* takes its root from the *Ama* only. *Dalhana* adds that not only *Dosha* but *Medadhātu* is also in the *Ama* form. In *Madhumeha* we also get the dominance of *Ama* regarding *Kapha*, *Meda*, *Mamsa* and *Kleda*.

As *Prameha* is disease related to metabolism it suggests that there is defect in the *Agni* (*Agnimandya*). There are 3 types of *Agni* stated in *Aurveda* – *Pachakagni*, *Bhutagni* and *Dhatvagni*.

**Pachakagni** – *Pachakagni* is the main among all *Agni*, as all of them are dependent on *Pachakagni*. The chemical factor which transforms exogenous substances into endogenous substances in the body may be stated as *Agni*. Thus the ptylin enzyme, Hcl, pepsin, renin, dextrin, gastric secretions, lipase, bile, trypsin, chemotrypsin, amylase, duodenal secretions, and intestinal secretions may be said to a part of *Pachakagni*. So, pancreatic exogenous and secretions can be also a part of *Pachakagni*.

**Bhutagni** – As *Nidana* of *Prameha* are having *Pruthvi* and *Jala Mahabhtadhikya*, *Pruthvyagni* and *Jalagni* are

hampered in the disease. Again *Kapha* is composed of *Pruthvi* and *Jalamahabuta*. Therefore defective functioning of *Bhutagni* leads to production of *Vikruta Kapha* in excess and thereby increases *Madhura Rasa* in the body.

**Dhatvagni** – This is the main level of disturbance in *Prameha*. *Dhatu* are main building components of the body (*Dehadharaka*). The *Dhatvagni* of respective *Dhatu* in its natural state is essential for its *Paka*, *Brumhana* and *Tarpana*. And their *Kshaya* is seen due to increased *Dhatvagni*.<sup>[6]</sup> In *Prameha* either qualitative or quantitative vitiation in *Dhatvagni* take place particularly *Rasa*, *Rakta*, *Mamsa*, *Meda*, *Majja* and *Shukra Dghatvagni*. In case of *Aavaranjanya Madhumeha* excessive fat deposition on the body indicated *Medodhatvagnimandya*. The same thing is applicable to another *Dushya* also. Therefore *Agni* plays an important role in *Prameha*.

### (E) Prakriti and Prameha

*Doshika* predominance at the time of Union of male and female gamete forms the *prakriti*. *Kulaja prameha* is the *prameha* patient who is born of parents who were also suffering from this ailment. Hence we can state that diabetes is hereditary (*Sahaj*). *Kapha Prakriti*- As there is predominantly *dushti* of *kapha dosha* in *prameha* so being of similar *gunas* in *kapha prakriti prameha* occurs easily.

### (F) Oja and Prameha

*Ojas* is the essence of the seven *dhatu*s, which manifests in the form of *bala* (strength). It can be co related to immunity and it is responsible for vitality and strength of the body. As *oja* is compared with immunity, the loss of *oja* causes the *prameha* patient more prone to various infective diseases. It is affected in *Vataja Prameha* i.e. *Madhumeha*. *Oja* is a main *dushya* in *madhumeha* provoked *vata* displaces the *madhuratwa* of *oja* with *kashayatwa* and carries *oja* towards *basti* and excretes through urine.

According to *Chakrapani Aparajita* *Oja* is vitiated in *Prameha*.<sup>[7]</sup> The symptoms which are produced due to *Oja* are: *Tandra*, *Nidra*, *Murchchha*, *Mamsakshaya*, *Moha*, *Daurbalya*, *Gurugatrata* etc.

### (G) Role of hormones in DM

**Insulin**- It is anti-diabetic hormone. It helps in peripheral utilization and Storage of Glucose. It inhibits glycogenolysis and gluconeogenesis.<sup>[8,9]</sup>

**Glucagon**- It increases BSL. It increases glycogenolysis in liver not in muscles.<sup>[10,11]</sup>

**Liver** – It acts as important glucose buffer system. After meal BSL increases & excess glucose is converted into glycogen & stored in liver.

Growth hormone- It increases BSL and decreases peripheral utilization of glucose for production of energy. It shows Diabetogenic effect of GH.<sup>[12]</sup>

Cortisol - It shows anti-insulin action. Due to hypersecretion of cortisol, BSL increased causing adrenal diabetes and glycosuria.

Adrenaline - It increases BSL with increased glycogenolysis in liver and muscles.<sup>[13]</sup>

Thyroxine - It increases BSL due to absorption of glucose by GI tract and breakdown of glycogen into glucose.<sup>[14]</sup>

#### (H) Sharir Kriyatmak effect of Prameha

Following are some of the complications which occur due to alteration in the physiology of the body.

1. Neuropathy- In the later stage of prameha when vata gets vitiated all types of prameha gets converted into madhumeha. The main complication which occurs is *Sangyahaani* (loss of sensation). Acharya *Vagbhata* has stated the lakshan of Vatavrudhi as “*Indriya bhransh*”, i.e loss of perception of senses.

2. Retinopathy- This is caused by the vitiation of all the three doshas. In eye predominancy of teja mahabhuta is seen. In diabetic patient due to vitiation of Kapha Dosha and increased in kleda vascular changes is caused in eye and finally when vata gets vitiated the retinal detachment occurs causing loss of vision.

3. Nephropathy- It is the leading cause of all the renal failure worldwide. Kapha Dosha (Dravatva) & kleda renders Medodhatu Dushana (*dhatvagnimandya*) & gets transformed into Mutra thus leading to obstruction in Mutravahasrotas. Because of renal vasculopathy fibrotic changes develop in kidney, further causing glomerular sclerosis and arteriosclerosis which ultimately causes the nephropathy.

4. Osteoporosis- Ayurveda says that *Asthi Dhatu* is not affected in diabetes. But according to modern, osteoporotic changes are seen in diabetic patient. This is because of Insulin like growth factors and other cytokines influence Bone metabolism. Thus reducing bone density. The other cause of osteoporosis is that Excess fat produces more fat cells than bone cells in bone marrow which may explain the weakening.

5. Circulatory system- High blood glucose leads to deposition of fat in the blood vessel causing its hardening. This leads to coronary heart diseases.

These patients are more prone to develop foot disorders. As diabetic patient got the poor healing tendencies sometimes amputation of foot is also indicated.

#### DISCUSSION AND CONCLUSION

*Prameha* is one of the leading and progressive diseases found in India. It is a very complex disease in which there are many *dushyas*.<sup>[2,3]</sup> Were *Kapha* is the dominant Dosha and *Meda* is common *Dushya* in all prameha samprapti. *Prameha* is *Tridoshaja Vyadhi*. Hence the three doshas are responsible in producing *Prameha*. *Oja*

is a main *dushya* in *Madhumeha* provoked *Vata* displaces the *madhuratwa* of *Oja* with *kashayatwa* and carries *Oja* towards *Basti* and excretes through urine. As it is disease related to metabolism it suggests that there is defect in the *Agni* (*Agnimandya*). The defective functioning of *Bhutagni* leads to production of *Vikruta Kapha* in excess and thereby increases *Madhura Rasa* in the body.

In *Prameha*, the normal function of *Mutra* get disturbed and it excretes excessive *Kleda* from urine. Due to *Mutravikruti*, symptoms of *Mutravrudhhi* are also seen in *Prameha*. There is quantitative increase in *Dravatva* of *Kapha* due to the elimination of excessive *kleda* with urine. Turbidity in urine is due to presence of *Dosha* and *Dushyas* in the urine. *Kledavidhruti* is the function of *Sweda*. Symptoms of *Swedovridhhi* are seen in *Prameha*. Thus almost all the dhatus are involved in this disease which leads to either *asadhyatwa* or *krichrasadhyatwa*. Basically *Prameha* is due to *apachit dhatu vrudhhi* and vitiated *kapha dosha* but *Madhumeha* has *dhatukshaya* and *vaat vrudhhi*.

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