

AYURVEDIC CONCEPT OF MUTRA NIRMITI: REVIEW ARTICLE

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ABSTRACT

Dosha, Dhaatu, Malas are the three functional units of human body. They are responsible for maintaining health of an individuals and also to cause disease. *Hitkar aahar* is the building block of Body. According to Ayurveda *Malas* are formed as waste products of digestion and metabolism. *Purisha, Mutra* and *Sweda* are *Malas* formed in body. Formation of these *malas* begins in *Pakwashaya*. *Mutra* is very important entity in the maintaining Homeostasis of body. Process of *Mutra Nirmiti* in Ayurveda is described as functional point of view. If one has to treat the patient with diseases related to *Mutra like Mutravaiwarnya, Mutrakruchhra, tuni, pratituni etc*, he has to consider vitiation of *Mutravaha Strotas* and *Pakwashaya*. Hence this article

reviews complete process of *Mutra Nirmiti* or urine formation on Ayurvedic basis.

KEYWORDS: *Mutra Nirmiti, Mutravahi srotas, Urine formation, Pakwashaya, Mutravahi naadi.*

INTRODUCTION

Tridoshas, Sapta Dhaatu, Trimalas are the basic unit of body.^[1] For the *Hitaayu* and *Sukhayu* there must be equilibrium in these basic units. *Purish, Mutra* and *Sweda* are considered as main excretory product of body and called as *Mala*^[2] due to their principle property of *Malinikarana*.^[3] *Malas* are formed as a waste product of digestion and metabolism. Hence *Malas* are categorised into *Annamalas* and *Dhaatumalas*.

Purisha, Mutra and *Sweda* the *Trimalas* are formed at the end of *Pachana* (Digestion) as the *Kitta bhaag* of *Pachana*. That means after *Pachana* of food, the *Prasaad bhaag* is called as

Aharrasa and *Mala bhaag* is called *Kitta*. *Purisha* and *Mutra* are *Annamala* as said by Charakcharya.^[4] *Dhatumala* are formed by *Dhatupaka* that is during formation of *Dhatu* by *Dhatwagni*. Altogether they are eight in number as mentioned by Acharya Charaka.^[5] As *Jatharagni* acts on food and divide it into *Sara* and *Kitta* portion. *Sara bhaag* is used for the formation of *Dhatu* and *Kitta bhaag* nourishes the *Purish* and *Mutra*. *Ghana* part of *Kitta bhaga* is *Purish*. Liquid part goes to *Mutravaha srotas* where it is stored in *Basti* and then excreted as *Muttra* under the control of *Apan Vaayu*.

AIM AND OBJECTIVE

To review concept of *Mutranirmiti* according to *Ayurveda Samhitas* and physiology of formation of urine.

MATERIALS AND METHODS

For this conceptual study, detailed literary study was performed. The contents and references related to *Mutra* were analysed from *Brihatrayee*, *Laghutrayee* and used for the review.

Physiology of formation of urine in Ayurveda:

There is difference of opinion in *Moolasthanam* of *Mutravaha srotas* in *Charak* and *Sushruta Samhita*.

Table 1: *Mutravaha Srotas Moolsthana*.

Table 1 : <i>Mutravaha Srotas Moolsthana</i>	
Charak Samhita ^[6]	Sushrut samhita ^[7]
<i>Basti</i>	<i>Basti</i>
<i>Vankshana</i>	<i>Medhra</i>

Acharya Sharangdhara in *Purvakhanda* also describes formation of urine is as a part of digestion of food. *Saarhin drava bhaag* of Food goes towards *Basti* which termed as *Mutra*. Acharya Sushrut has described formation of urine in the description of *Pitta dosha*. Where it is mentioned that after digestion of food *Doshas*, *Ahara Rasa*, *Purisha* and *Mutra* are formed.^[8] This formation occurs in *Pittadharakala* and process of micturition is controlled by *Apan Vaayu*. Process of *Mutra Utpaatti* begins in *Pakwashaysa*. The *Poshak Mutra* separated from *Kitta* is absorbed from *Pakwashaya*^[9] and brought to *Basti* as water form river is continuously drained into ocean that is continuously through *Mutravaha Nadi* *Mutra* is drained into *Basti*. These *Mutravaahi naadi* are spread in the cavity around *Pakwashaya* and

Amashaysa, which constantly drain *Mutra* to *Basti*.^[10] When *Basti* gets filled with urine, due to action of *Apana vaayu*, urine is excreted.

According to modern science urine formation takes place in kidneys itself includes 3 process^[11] 1. Glomerular filtration, 2. Tubular reabsorption and Tubular secretion. Urine formations begins when a large amount of fluid that is virtually free of protein is filtered from the glomerular capillaries into Bowman's capsule. Most substances in the plasma, except for proteins, are freely filtered, so their concentration in the glomerular filtrate in Bowman's capsule and passes through the tubules, it is modified by reabsorption of water and specific solutes back into the blood or by secretion of other substances from the peritubular capillaries into the tubules.

DISCUSSION

Mutra is comprised mainly of *Jal* and *Agni* mahabhuta.^[12] Ayurveda describes two main types of *Mala*, *Ahar mala* & *Dhatu mala*. *Ahar mala* mainly includes *Purisha*, *Mutra* and *Sweda*. The *Dravarup* (liquid) *mala bhaag* of *Aahar ras* gets the recognition as *Mutra* when it reaches the *Basti*. By considering these two aspects (i.e. site of formation and organ responsible for excretion) only *Basti* and *Medhra* are considered as *Moolsthana*. *Basti* is the site of formation and origin of *Mutra*. So we can say that fully formed *Mutra* gets collected in the *Basti*. The Urine carrying channels (*Mutravaahi Naadi*) originating from *pakwashaya* always fill with urine in the same way as the river fill the sea. Their openings are in thousands and because of their extremely minute nature are not seen that bladder gets filled up with urine by percolation having been carried there, by channels by channels from *Amashaya* during waking as well as sleep. As a new pitcher sunk into water up to its mouth fills up from the sides, similarly bladder gets filled up the urine.^[13] Hence periodically it is being eliminated out of the body from the urinary bladder through urethra. Hence *Medhra* is considered as *Moolsthaan* of *Mutravaha sroats* since it does the *vahana* of *Mutra* which is being formed in *Basti*.

The basic difference of mechanism for urine formation in the theories of Ayurved and modern science is of according to Ayurved *Mutranirmitti* takes place in *pakwashaya* whereas according to modern science it starts in kidneys. The benefit of Ayurvedic mechanism is it simplifies the relation of diet, toxins, connection with other organs like liver, heart so that it will be better for understanding pathophysiology of different kind of nephropathies, syndromes like hepatorenal syndrome, cardiorenal syndrome.

The Ayurved concept of urine formation will help to solve the etiopathogenesis of many renal diseases, the researchers should go through this concept.

CONCLUSION

In Ayurveda functional description of urine formation is considered which starts from *Pakwashaya*. If one has to treat the disease related to *mutra* according to Ayurveda one should think of the drugs acting on *pakwashaya*. It is also mysterious to know that *Basti* upakrama (one of the panchakarma) in *Ayurveda* acts mainly on *pakwashaya*. So *Basti* treatment is advised and found to be useful in many diseases where *Mutranirmiti* is affected. The acceptance of Ayurveda process of urine formation can helpful in better understanding of Allopathic renal diseases.

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