"AYURVEDIC CONCEPT OF URINARY EXCRETORY SYSTEM; W.S.R. TO KRIYA SHARIR"

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ABSTRACT

Ayurveda is the heritage of health care and a way of life. Dosha, Dhatu and Mala are the basic principles on which our entire Ayurveda is based. These three are in equal balanced proportion is very important to maintain our human body and keep it in a disease free state. Disturbance of dosha, dhatu and mala results many disorders which require correction so as to help the patient clinically. Fortunately, ancient science of Ayurveda has propagated various principles and disease related measures, in order to restore health. Ayurvedic approach to urinary system is highly logical, conceptual and scientific. Normal functions of living organism are human physiology when there is disturbance of human physiology there is pathology occurs. So it is most important to know Ayurveda physiology. Urinary system of human body is explained in various Ayurveda text books. Ayurveda is a complete “A holistic approach to urinary health considers diet, lifestyle and environmental issues. Here review role of Mala i.e. Mootra with principles of Ayurveda, Mootra in relation to Dosha, Dhatu, Mala, Sara, Prakriti. Ayurveda is a complete, conventional, efficient and popular ancient medical system practiced in India. The aim of this review to upgrade the knowledge related to ayurvedic physiology of urinary system so as to prevent, diagnose and can treat the disorders of urinary system. Ayurveda is a global need of the day because treatment is effective and also safe is the unmatched quality of Ayurveda. In this article expanding ayurvedic human physiology and also highlighting the diseased condition.

KEYWORDS: Physiology, Urinary system, Dosha, Dhatu, Mala, Mootra.
INTRODUCTION

“Samdosha Samagnisch Samdhatu Malkriyah Prassnatma Indriya Mana Swastha Ityabhidiyate.” Ayurvedic techniques focus on achieving that balance of trienergies that are Vata, Pitta and Kapha. Health according to Ayurveda is balance of these trienergies. Their imbalance is the cause of disease or ill health. Their balance is disturbed by irregular lifestyle, prolonged physical and mental stress, wrong dietary habits, incompatible foods, misuse of senses. Dhatus(tissues) there are seven dhatus which support our body. Dhatus described in Ayurveda are the various organs and parts of our body. They are Rasa(Plasma), Rakta(Blood), Mamsa(Muscles), Meda (Fatty tissue), Asthi(Bones), Majja (bone marrow), Shukra (Semen and Reproductive tissue). Mala represents the byproducts resulting from the physiological and metabolic activities going inside the human body. Mala is an important topic of human physiology or Sharir kriya. The three primary Malas being Purish (Faeces), Mootra (Urine) and Sweda(Sweat). Malas (waste products) forms the essential and basic components which support the vital functions of the human body. Srotas are the channels of circulation present in the human body. Physiological great importance to Srotas. Charakacharya says that Srotas as the channel through which various important physiological functions takes place. Physiological point of view, channels are primarily responsible for the circulation of products. Physiologically tissue performs significant functions. To ensure its own nutrition and to provide nutritional factors for the development of corresponding tissue. Mootra (urine) is important waste product of the human body. Mootravaha srotas (urinary channels of circulation) the Vrikka(kidneys) and Mootrashaya (urinary bladder) are the originating point of Mootravaha Srotas.

• DISCUSSION

Mala According to Ayurveda

Like Prakriti, Dhatu, Dosa and Updhatu; ‘mala’ concept is unique in Ayurveda. Mala known as Aatmbala by Aacharyabhela, Aacharya Bhavprakash says in mala specially life (jiv) is remain and Aacharya Yogratnakar says that life depend on mala.

Sthoool pachan i.e esophageal digestion. During digestion end product form is divided into in saraform (aahararasa) (dhatu poshak ansh) and kittabhag (mala poshak ansh).

• Types of malas are sthoola mala that are the mootra, purisha and sweda. Sukshma mala that are form on dhatu level.
- **Sukhma mala** like *rasa dhatumala* is *kapha*, *lasika* (lymphatic fluid) (says by *ashtang samgrahakar*), *rakta mala* is *pitta*, *mamsa mala* is *khamala* (secretions of nose, eyes and ear), *meda mala* is *sweda* (sweating), *asthi mala* is *kesh*, *loma*, *nakh*, *smshashru* (hair, nails, beard), *majja mala* is *sneha* of *akshi*, *vita*, *twak* (eye secretions, fecal secretion, oil or sebum secretion) a *sneha bhag. shukra mala* is *ojas* (immunity).

- **Sthool mala that is mooтра(urine)**
  Synonyms for *mootra* are the-*bastimala, meha, mootra, nrujalam, prastrava, strava.*

- **Synonym Bastimal give to mootra** according to storage function, *meha* and *mootra* is for excretion related, *prastrav* and *strav* is for physiological action related.

Location According to- urine formation is *vrikkha* (kidney), for carriying is *Gavinya* (ureters), for storage is *mootrashaya* (urinary bladder), for excretion *Mootraprasek* (urinary spinster’s, urethra).

Panchbhautik sanghatan of mootra is Jal and Agni mahabhut (water and fire constitution). Praman of mootra says *is 4 Anjali. Guna* i.e. touch sensation is slightly hot. *Roop* i.e. colour is slightly yellow. *Ras* i.e. taste is salty and spicy. *Gandha* i.e. smell is special smell is a urine smell (like ammonia). Urine is present in the form of liquid.[1] Urine having main function is *kledavahan.*

Pathology in *Mootra* that is polyuria means excess urine formation with penetrating pain and also desire to urinate after urination.[2] When there is Less urine formation in kidney then occurrence of symptoms is the less quantity of urine excretion, difficult urination, bloody urination, changing color of urine.[3]

**Mootra and Vata dosha relation**
- **Micturition** is process of excretion of urine from urinary bladder.
- **Nervous control**

1. **Pelvic nerve** – supply Sensory fibers from bladder to 2nd, 3rd segment of spinal cord. Motor fibers from sacral segments of spinal cord to wall of the bladder.
2. **Pudendal nerve**- supply skeletal motor nerve fibers to external urinary sphincter of bladder.
Roll of Cerebrum and Pons in originating micturition reflex

Sensory signals from sacral spinal cord to pons and thalamus. Thalamus to cerebral cortex. In inconvenience, cerebrum prevent urination by pudendal nerve and external urinary sphincter contracted. When convenient and desired, cerebrum decreases motor control over external urinary sphincter by pudendal nerve and urination occurs.

This micturition process is carried out in the body by Vata dosha. As all the movements are due to vata.⁴ Out of 5 types of Vata, the excretion process is done by Apan vayu.⁵

When Apan vayu get vitiated it causes obstruction of mootravaha srotas leading to painful micturition as there is no pain without intervention of the deranged vayu.

Suppression of urination- it leads to Collection of urine in bladder. This leads to the over stretching of bladder, thus stimulating the pain in bladder to evacuate this collected urine, force has to be applied thus causing painful micturition. UTI- Bacteria cause UTI typically enter bladder via urethra. Infection also occur via blood. Bacteria transmitted to urethra from bowel, with greater risk due to anatomy. After gaining entry to bladder, E. coli attach to bladder wall and form a biofilm that resist body's immune response.

Mootra and Pitta dosha relation

Increased in pitta dosha that is Raktamala pitta makes urine yellow (here pitta indicates the one which is formed during formation of raktadhatu).⁷ This can be correlated in modern with RBC destruction which produces bilirubin. This bilirubin then gives color to the urine. In Pitta Prakriti persons get excess secretion of urine.⁸

Raktavaha stotas moolasthana is a liver and spleen. Raktamala pitta form in liver. Liver also called Raktashaya and it is the place of Ranjaka Pitta by sushrutacharya. Raktamala pitta function is to gives color to urine and then after that to excrete. Deformity in Raktamala pitta, to develop jaundice. Kapha production- ‘ken Jalen phalati iti kapha:|’. The particular dosha is kapha consisting of abundant fluid. Pathology is increase in drava guna so kledak kapha vitiated and causes dhatvagnimandya by charakacharya. Common symptoms develop is more kleda formation and for this excretion of kleda more urine form and polyuria like symptom is associate. Mootravaha srotas (channels carrying urine) have their root in basti and vanksana. Symptoms of their morbidity are these such as excessive excretion, excessive obstruction or suppression, vitiated, diminished or frequent thick urine with pain indicate the morbidity of
mootravaha srotas. Def of Polyuria is excessive production or passage of urine. Whenever red blood cells are destructed there is increase in bilirubin production and urine becomes more concentrated and dark yellow urine appears.

**Mootra and Kapha dosha relation**

According to Charakacharya, the function of kapha is to produce kleda. The body fluid in which dhatus are dissolved known as kleda. Kleda which is thrown out of body through urine excretion. When there is excess excretion of kleda through urine which can correlated with the condition is Polyuria. Defination of polyuria says that excessive production or passage of urine.

**Mootra and Dhatu relation**

**Mootra and Rakta dhatu relation**

Panchabhautik samghatan of Mootra and Rakta dhatu is same that is jala and tej mahabhuta. Mootra is formed from tej(fire) and jala (water). Rakta(blood) is formed from tej(fire) and jala (water). Both are formed from same physical constituents and same qualities both have. Urine formation is actually made from blood. So there is relation between the urine and rakta dhatu i.e. blood. The steps including Glomerular filtration which is the Process by which blood filtered while passing through glomerular capillaries by filtration membrane. It is first process of urine formation.

**Mootra and Mamsadhatu**

Mamsa dhatu (muscle tissue) function is to regulate and retention of urine. Detrusor muscle have a capacity to strengthen tension on Bladder. Urination requires relaxation of external and internal urinary sphincter with contraction of detrusor muscle. When external sphincter relax then only internal sphincter relax and urination takes place.

**Mootra and Medadhatu**

The kidneys (vrikkas) are made out of the essence of the blood and fat. Medovaha stotas moolsthana by charakacharya is vrika (kidneys) and vapavahan (omentum). Mootravaha srotas are the urine carrying channels have their root in basti (kidneys) and vankshana (waist region). The urine carrying srotas have their roots in the bladder and the penis (urethra), Fat carrying srotas (ducts)have their roots in the region of the kati (waist region) and the vrikkas (kidneys). Moolsthana of meda dhatu is kidney so there is relation of medodhatu with kidney. Medovaha srotas are affected due to lack of physical exercise, day sleep, excessive
intake of fatty food and alcoholic drinks.[14] When there is occurrence of pathological changes in metabolic process of meda dhatu then there will be occurrence of improper functioning of kidney. That’s improper functioning of kidney, then will be arise prameha like vyadhi. In prameha, meda dhatu get vitiated so the moolastana of medadhatu i.e. kidneys got to anatomical and physiological deformity. The improper functioning of kidney which transferred into a diabetes mellitus.

**Mootra and Sarata**

**Medasarata**

Reference about vrikkva- vrikkau utpatti -For embryological origin of kidneys arise from Rakta and Meda.[15] The persons with essence of medas have particular unctuousness in urine and feces.[16] The meda is oily which is says in a literature of shabdaklpadrum giving definition such as the substance which is oily known as a meda.

Peritoneum composed of a layer of mesothelium supported by thin layer of connective tissue. Structures in abdominal cavity located behind intraperitoneal space called retroperitoneal (e.g. KIDNEYS). Peritoneum composed of a layer of mesothelium supported by thin layer of connective tissue. Structures in abdominal cavity located behind intraperitoneal space called retroperitoneal (e.g. KIDNEYS).

Ayurvediya mootra parikshan- aacharya yogratnakr explain ayurvediya mootra parikshan as a tailabindu parikshan. In ancient year there are no any instruments and methods develop for urine examination then our aacharyas do parikshan according to direction of flow of urine on oil. In this they are saying that when urine goes to north direction it mean health, in south direction mean happiness, in west direction fever and disease is mild difficult to treat, when in north-east direction death is confirm, when in east-south direction in urine have a filter pore like holes, when to east-south patient cannot live when give any type of rejuvenation or rasayan, when in north-west can live just one month.

**CONCLUSION**

In Ayurved samhita dosha, dhatu and mala are described. Samhita text explained two type of sharir mala i.e. human excretory product and dhatumala. Here we explain sharir mala. Mala do function of dharan for treatment purpose i.e. the present study establishes the relationship between mootra mala and urinary excretory system. This study is link Ayurveda and suspected modern corelation. Also this study to understand practical use of Ayurveda review
knowledge. For better clinical approach in practice we have to require this type of theoretical knowledge.

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