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Physiological study of *sweda mala* w.s.r sweat

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ABSTRACT: -

Mala (waste) according to *Ayurveda* like *Prakriti*(constitution), *Dhatu*(body tissues), *Dosa* and *Updhatu*; *mala* 'concept is unique in *Ayurveda*. *Mala* (waste) known as *Aatmbala* by *Aacharya bhela*, *Aacharya Bhavprakash* says in *mala* specially life (*jeev*) is remaining and *Aacharya Yogratanakar* says that life depend on *mala*. During digestion end product form is divided into in *sara* form (*aahararasa*) (*dhatu poshak ansh*) and *kittabhag* (*mala poshak ansh*)^[4]. The human body is nourished by the elements of air, water and food from the external world, by converting these products in bodily assailable form through the process of digestion. During this process of digestion at macro and micro levels, there are also certain bi-products which are produced in the body as excretory wastes. These products are not useful for the body and hence are regularly disposed off if these products are not excreted on a regular basis they can prove harmful for the body. These elements are completely opposite to those of *Dhatu*s and hence these excretory wastes are known as *Mala Malinkaranata Mala* there are several different excretory wastes formed during the various stages of digestion out of which the *Purisha* (feces), *Mutra* (urine) and *Sweda* (sweat) are the main excretory wastes. We usually ignore the process of sweating unless it happens in excess and gives bad odor to the body. Today let's explore how this simple process of sweating influence skin texture, constitution of body to the definite signs of death. *Ayurveda* mentions different substances that influence normal functioning of the body. Normal excretion of *sweda* (sweat) is one among them.

Keywords- *Mala, Sweda, Dhatu, Purisha, Aahararasa*



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INTRODUCTION:-

As a consequence of foods which we take into our bodies from the external world and the normal biological processes which take place internally, we generate different kinds of waste materials, or *malas*, which must be excreted. Mala - '*Malinikaranath malah*' the word mala means which cause intoxication. Stools, urine and sweat are considered as three waste products that have to be excreted out from the body regularly. In normalcy they sustain health but same when gets contaminated can be hazardous to health. *Ayurveda* generally recognizes two kinds of *malas*:

- *Ahara mala* or wastes from food
- *Dhatu mala* or wastes from the tissues

The *ahara malas* include feces (*purisha*), urine (*mutra*), and sweat (*sweda*). These are the three main *malas*. The *dhatu malas* include the various secretions of the nose, eyes, ears, lactic acid, carbon dioxide, and other metabolites of cellular respiration, exfoliated hair, skin, and nails Although these are all waste products, they serve a role in maintaining health as long as they are normal in their quantity (*pramana*), qualities (*gunas*) and function (*karma*) However, if the *malas* become abnormal in some regard (i.e. increased or decreased) they become a factor in creating disease. When the *dhatu*s and *malas* become unbalanced they are called *dushyas* (soiled)^[4].

According to *Ayurveda* only a balanced condition of *Dosha*, *Dhatu* and *Mala* (waste) is *Aarogya* (good health or disease free condition, and their imbalance causes it health or disease Balanced *Doshas*

(humors'), healthy Agni, a good state of tissues and their metabolic end- products lead to a balanced state of the senses, mind and spirit, all of which lead to health. *Ayurvedic* text books talk about two kinds of Eliminate or Waste Materials. I *Ahara mala* or wastes from food (waste products derived from food) *Dhatu mala* or wastes from the tissues (waste products expelled from cells and tissues). Sweat is considered as *sweda* (sweat) in *Ayurveda*. It is one among three waste matter of the body which is called as mala. Literally the word *sweda* (sweat) is vapor. The process that causes sweating is known as *swedana* (Sudation). Sweating is the process of excreting the toxins from skin pores in the form of sweat. Sweating is a natural process of the body to let out excess heat and to cool down the body. But excessive sweating can be a sign of underlying disease. Excess sweating is called Hyperhidrosis. The human body is nourished by the elements of air, water and food from the external world, by converting these products in bodily assailable form through the process of digestion. During this process of digestion at macro and micro levels, there are also certain bi-products which are produced in the body as excretory wastes. These products are not useful for the body and hence are regularly disposed off. If these products are not excreted on a regular basis they can prove harmful for the body. These elements are completely opposite to those of *Dhatu*s and hence these excretory wastes are known as 'Mala' '*Malinikaranata Mala*' (Toxication). There are several different excretory wastes formed during the various stages of digestion out of which the Stools or *Purisha*, *Mutra*-urine and *Sweda*-

Sweat are the main excretory wastes. Miscellaneous waste includes tears (eye), spit (tongue), oily secretions (skin), mucoid secretions (mucus membrane), *Malas* (bodily wastes) help maintain the functioning of our organs^[6].

- Secretions of the nose including nasal crust, tears in the eyes, was in the ears are *Mala* or waste.
- When we exercise and produce lactic acid, or, exhale carbon dioxide, – that is considered a mala as well. Hence, breathing deep and *pranayama* is suggested in the morning time.
- Hair and Nails are considered *Mala* or waste of *Asthi Dhatu*.
- Sweat is a waste of *Meda* or *Mamsa dhatu*.
- Elimination through regular bowel movements, as well as sweating, is key to good health according to *Ayurvedic* principles.
- To be considered healthy – *Ayurvedic* practitioners check the quantity (*pramana*), qualities (*gunas*), and function (*karma*) of all the above waste products.
- When body does not produce enough *Mala* (waste) – it causes imbalance, and *Ama*. *Ama* are fat soluble and water soluble *Ahara Mala* (waste) that have not been digested or eliminated by the body.
- Just like a compost bin filled with organic waste when not cleaned may start smelling and start producing germs, undigested food particles or *Ama* (undigested food) gives rise to toxins.
- Signs of *Ama* may include, but, are not limited to waking up tired even with a full night's sleep, low energy, lethargy, fatigue, bloating, flatulence, constipation, or diarrhea, pain while urinating,
- Strong odor in stool, urine and sweat; dark yellow urine, skin breakouts, abnormal discharges, white coating on tongue, colored mucous, congestion^[6].

An imbalance of the elements in the body causes abnormality in quality or quantity of the *malas*(waste), thus leading to diseases. For example:

An increase in *Purisha* (feces), composed mainly of the element *bhoomi* (earth), causes abdominal

unrest. Any decrease in *Purisha* (feces), can lead to bloating, abdominal pain, back pain, asthma, hypocalcaemia etc.

Mutra or urine is composed mainly of *jal* (water) and *agni* (fire). Any increase can cause infections to urinary tract and bladder dysfunction. Reduced urine production can cause kidney stones.

Sveda or sweat is composed mainly of *jal* (water). Increased sweating can cause dehydration, lowered body temperature, fungus attack on skin, body odour etc. Decreased sweating can lead to dry skin and high body temperature.

MATERIAL AND METHODS:-

Ahara Mala (waste) :-

Ayurveda believes we are not just what we eat - we are also what we digest! Digesting and eliminating whatever we put in our bodies is referred to as *Ahara Mala* the three primary *malas* being *Purisha* (feces), *Mutra* (urine) and *Sweda* (sweat).

Sweda (Sweat):-

Sweat or Perspiration is known as *Sweda* (Sweat) in the terms of *Ayurveda*. It is basically a fluid that comes out of skin pores and primarily consists of water as well as various dissolved solids. It is basically a means of thermoregulation in human body. Any imbalance in sweat production can lead to itching skin infections, irritation, and burning sensation of body or reduced body temperature. The word *Sweda* (Sweat) literally means the element expelled out of the body due to fomentation or heat treatments. *Sweda* (Sweat) is formed as the *Mala* (waste) of *Meda Dhatu* and the main location of *Sweda Vaha Srotas* (channels carrying sweat) are also described as *Meda* and *Romakupa'* or the small pores on the skin. The *Sweda* (sweat) is formed as an excretory by product of the digestion of *Poshya Meda Dhatu* by the *Meda Dhatwagni* in the *Meda Vaha Srotas* - *Sveda* or sweat is composed mainly of AAPAH[Water] Sweat (*sweda*) controls the body temperature by way of expelling excess water and toxins, cools the body. The fluid element expelled

out of the small pores on the body due to heat or activity in known as *Sweda* or sweat. *Sweda* (sweat) is formed as the *Mala* of *Meda Dhatu* and the main location of *Sweda Vaha Srotas* (channels carrying sweat) are also described as *Meda* and 'Romakupa' or the small pores on the skin. The *Sweda* (sweat) is formed as an excretory by product of the digestion of *Poshya Meda Dhatu* by the *Meda Dhatwagni* in the *Meda Vaha Srotas*. Sweat (*sweda*) controls the body temperature by way of expelling excess water and toxins, cools the body, moistens the skin and

hair, carried excess fat from the body, and purifies the blood. Excess sweating can cause skin diseases (usually *Pitta* related) like eczema, boils, fungus, burning skin, dehydration, fatigue, or convulsions (*Váyu* caused). Deficient sweating can result in stiff hair, skin fissures, dry skin, dandruff, wrinkles, or susceptibility to colds and flu (i.e., peripheral circulation). Too much dry food, lack of salt, excess or deficient exercise, and excessive use of diaphoretic herbs or excess sweating damage the sweating functions.

***Kshaya-vriddhi of malas*^{[4] [5]}:-**

Type of Ahara Malas	Mala Vriddhi (increase)	Khsaya (decrease)
Feces (<i>purisha</i>) <i>Mahabhuta</i> : earth	Heaviness, Flatulence Abdominal discomfort (generalized)	Bloating Abdominal pain (mid back pain), Weakness Osteoarthritis, Hypokalemia Hypocalcemia
Urine (<i>mutra</i>) <i>Mahabhuta</i> : water and fire	Urinary frequency Bladder dysfunction, Urinary tract infections	Reduced urine, Chronic thirst, Renal stones, Abdominal pain (lower)
Sweat (<i>sveda</i>) <i>Mahabhuta</i> : water	Perspires easily Fungal dermatomes Low body temperature, Constipation Body odor Itching Constipation	Decreased perspiration, Dry skin Burning sensations, High body temperature

***Panchabhaut composition*:-**

The *malas* are also composed of the *panchamahabhootas* (the five principle elements of nature). All *malas* serve certain purposes before the body expels them. The skin, before shedding,

guards the body tissues from infection. Hair, before expulsion from the body, helps regulating body heat. Sweat maintains body temperature and urine gets rid of toxic wastes from blood. The right balance of elements in the body ensures that the *malas* function normally.

<i>Mala</i>	<i>Panchmahabhut</i>	<i>Parman</i>
<i>Sweda</i> (Sweat)	<i>Jala+agni</i>	10 <i>anjali</i> ^[3]

***Sweat formation and functioning of Doshas*:-**

Food is digested by particular digestive fire (*pachaka pitta*). The moisture particles of digested food are supplied to *meda dhatu* (fat tissues) which excretes them through sweat glands, this process of excretion of sweat is carried out by *Vyana vayu*.

Some part of sweat is derived directly from tissues much fat tissue and some part of it are derived from the water content of food.

Sweda mala(waste material) and tridosha:-

Sweat is the site of *pitta*. This is why *Pitta* people sweat more. When we are angry or excessively stressed, we sweat. When we go out on a sunny day,

we sweat. All these increase *Pitta Dosha* in the body, leading to sweating. On the contrary, sweating process decreases *Kapha* and *Vata Dosha*. Hence, *Kapha* and *Vata* body type persons do not sweat much, compared to *Pitta* body type person.

Functions of sweda mala (waste material):-

Mala (waste)	Karma (Functions)
<i>Sweda</i> (Sweat)	<ol style="list-style-type: none"> 1. <i>Kledha vidhrti</i>^[5]:- moisturizes the skin 2. <i>Saukumarya krit</i>^[4] - make skin soft and smooth 3. Maintains body temperature - <i>Pitta</i> resides in sweat and blood. When <i>ushna guna</i> of <i>pitta</i> increases it raises the body temperature which is then maintained by excreting excess heat from body through sweat. 4. Sweat eliminates the heat generated along with water soluble toxins present in blood, <i>rasa</i>, <i>medha</i> (fat tissues).

Excretion:-

Sweat is considered as *ap dhatu* (water element of body) Sweat, urine excretory channels and water

carrying channels are considered as water balancing system of body. When these systems get contaminated they use various diseases due to disturbed water balance.

Mula of sweda waha sarotsa^[2]:-

Mala	Mula (Roots of channels)
<i>Sweda</i> (sweat)	<i>Medha</i> (fat tissue) and <i>loma kupa</i> (hair follicles).

Vitiation of sweda mala^[6]:-

Mala	Cause	Symptoms	Diseases
<i>Sweda</i> (sweat)	<ol style="list-style-type: none"> 1. Excessive exposure to sun 2. <i>Krodha</i> - anger 3. <i>Shoka</i> - grief 4. <i>Bhaya</i> fear 5. <i>Sheetha ushna akrama sevath</i> - irrational use of cold and hot substance 6. Intake of hot food substances 7. Indigestion 8. Excess intake of water and dry food items 9. Suffering from excessive thirst 	<ol style="list-style-type: none"> 1. <i>Aswedha</i>- absence of perspiration 2. <i>Ati sweda</i> - excessive sweating 3. <i>Ati parushya</i> - roughness 4. <i>Ati shlakshna angha</i> - excessive sliminess of skin 5. <i>Paridhaha</i> - burning sensation all over body 6. <i>Lomahasha horripilation</i> 	<ol style="list-style-type: none"> 1. Skin diseases - psoriasis, <i>sheethapita</i> (urticaria), herpes, measles, dermatitis, 2. dryness, scaling of skin etc 3. <i>Sthoulya</i> - obesity 4. <i>Daha roga</i> - burning sensation 5. Fever 6. <i>Prameha</i> - diabetes 7. <i>Raktha pitta</i> bleeding disorders

Sweda mala (sweat) and dhosa:-

Mala	Dosha
<i>Sweda</i> (sweat)	<ol style="list-style-type: none"> 1. <i>Vatika</i> - less sweating 2. <i>Pittika</i> - profuse sweating, foul smell 3. <i>Kaphaja</i> - less sweating

DISCUSSION:-

“*Samdosha Samagnischa Samdhatu Malkriyah Prassnatma Indriya Mana Swastha Ityabhidiyate.*”

Ayurvedic techniques focus on achieving that balance of tri energies that are *Vata*, *Pitta* and *Kapha*. Health according to *Ayurveda* is balance of these tri energies. 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* (Feces), *Mootra* (Urine) and *Sweda*(Sweat). *Malas* (waste products) forms the essential and basic components which support the vital functions of the human body.

Ayurveda believes that diseases or illnesses can also be caused by imbalances in the waste removal systems of the body. The body primarily produces three types of waste products or *malas*, which are together known as *Trimala*. These are *Purisha* (feces) – which is solid waste or balance of digestive fire; *Mutra* (urine) and *Sweda* (sweat or water balance) – which are liquid wastes. The production and removal of these wastes in a channeled way is absolutely necessary and vital to maintain a healthy body and mind. Waste products other than the *Trimala* include tears, spit, oily secretions from the skin and other secretions from the sexual organs. *Malas* help to maintain and regulate daily functions of the organs. If balance between the *Tridoshas*, i.e. *vata*, *pitta* and *kapha*, is not maintained, the *malas* or waste products of the body are not effectively

eliminated from the body, which lead to health complications as explained below: **sweat** (*sweda*) Controls the body temperature by expelling excess water and toxins, moistening the skin and hair, carrying excess fat from the body, and purifying the blood and cooling the body. Excess sweating can cause skin diseases (usually *Pitta* related) like eczema (rough & patchy skin), boils, fungus, burning skin, dehydration, tiredness, or fits (*Vayu* related). Reduced sweating can result in stiff hair, skin patches, dry skin, dandruff, wrinkles. Too much dry food, lack of salt, excessive or little exercise and excess sweating damage the sweating functions.

Malas must be discarded by the body regularly for it to function properly. *Malas* can transform and affect *Dhatus*, which will in turn impact the balance of *Doshas*. This can cause a series of ailments. Hence, wastes formed after the energy burning processes in the body have to be expelled. *Mala*-related problems include hair loss, abdominal pain, urinary tract infection, fungal infections, dehydration and body *odour*.

CONCLUSION:-

Ayurveda is the heritage of health care and a way of life. *Mala* are the basic principles on which our entire *Ayurveda* is based. Fortunately, ancient science of *Ayurveda* has propagated various principles and disease related measures, in order to restore health. 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. *Ayurveda* is a complete, conventional, efficient and popular ancient medical system practiced in India.

As a result of metabolic processes being carried out in the body, essence of ingested food and waste products are constantly formed. If waste products

are not being formed besides the essence i.e. beneficial products that nourish tissues, then metabolic process would be impaired ultimately leading to the formation of malformed tissues. So, there needs to be an appropriate segregation of essence of ingested food and waste product and excretion of the waste matter on appropriate time for maintaining health. *Malas* are actually the waste products of the body and their proper excretion from the body is essential, so that the proper health of the individual can be maintained because if the waste products are not thrown out they can toxify.

“Become healthy proper elimination of Waste Material or *malas* are very important”

“To Know *Ayurvedic* Life style and have an *Ayurvedic* consultation save numerous of disease”.

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