



UNDERSTANDING SWEDA AS MALA AND UPADHATU

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ABSTRACT:

Ayurveda is the science of life that not only deals with the disease and treatment but also explains how to maintain the health. It explains that *Doshas*, *Dhatus* and *Malas* are the root of the *Shareera* (body). All these entities in the body have their specific function and they circulate throughout the body through the channels called as *Srotas*. *Sweda* is one among the *Trimala* and is carried by the *Swedavaha Srotas* throughout the body. In modern physiology, Sweat and Sweat glands has similar function to that of *Sweda* in the body. An attempt is made to understand the *Sweda* as *Mala* and *Upadhatu* in relation to the physiology of the sweat and sweat glands.

Keywords: *Sweda*, *Mala*, *Upadhatu*, sweat, sweat glands.

INTRODUCTION:

In Ayurveda it is explained that *Doshas*, *Dhatus* and *Malas* are the root of the *Shareera* (body)¹. *Sweda* is one among the *Trimala* and its function is to provide moisture and lubrication to the body². According to Acharya Charaka and Vagbhata it is considered as *Mala* of *Meda Dhatu*³. According to Acharya Sharangadhara it is considered as *Upadhatu* of *Meda Dhatu*⁴.

AIMS AND OBJECTIVES:

To understand *Sweda* has both *Mala* and *Upadhatu* of *Meda Dhatu* in relation to modern physiology of sweat production and its function.

MATERIALS AND METHODS:

Ayurveda texts referred in this study are Charaka Samhita, Sushruta Samhita, Sarangadhara Samhita with commentaries, modern medical books and research articles.

DISCUSSION-

Sweda as Upadhatu -

- *Upadhatus* are the subtissues of the *Dhatus* that also has the action of *Dharana* and *Poshana* of the body.
 - Sweda is considered *Upadhatu* because of its –
1. Thermoregulatory function in the body-
Sweat evaporation from the skin surface cools the body⁵. According to the classics, the fluid of the body that comes out through the pores of the skin when exposed to heat is called as *Sweda*. It is one of the form of *Udaka* [fluid] of the body⁶. This clearly implies that excess of heat is expelled out of the body through the sweat mechanism that is necessary to maintain the homeostasis.
 2. *Sweda* provides moisture and lubrication to the body. Helps to maintain the softness of skin⁷.
Here *Sweda* does not only implies the sweat glands but also the sebaceous glands which produces sebum which is rich in cholesterol, triglycerides, wax esters etc. ,that helps to keep skin greasy and prevents drying⁸.
 3. It has role in water and electrolyte balance in the body, since formation and evaporation of sweat is an important factor in the regulation of water balance in the body⁹.
In classics too it is clearly stated that *Sweda* is *Aap Mahabhoota* predominant¹⁰, which implies that it has role in maintaining the fluid [water] of the body. Also the symptoms that appear just after excess *Sweda* are related to that of dehydration and electrolyte imbalance.
 4. It also has absorption action, since most absorbent part of skin is the hair follicles and pores. Thus can easily absorb lipids and lipid soluble substances¹¹.

Sweda as Mala-

Sweda is majorly considered and given importance as one among the *Trimalas*¹². It is well understood that just like *Purisha* and *Mutra*, *Sweda* has excretory functions. It is mentioned that the total quantity of *Udaka*(body fluids) in the body is about 10 *Anjali Pramana* in which *Sweda* is also a part¹³. So the excretion of the water in the form of *Sweda* is *Mala*. It is also mentioned that the *Pitta Prakriti* individuals perspire more when compared to other two *Prakriti*¹⁴. *Prakriti* concept in Ayurveda is the combination of phenotype and genotype of an individual. One among the research article suggest that *Pitta Prakriti* individuals have higher metabolism¹⁵. Thus more the metabolism, higher is the rate of energy production leading to increase in the body temperature and ultimately sweating. Metabolism also leads to formation metabolic waste leading to its excretion in form of *Malas*. In contemporary science sweat has excretory role because of its action of removing the waste from the body, eg. Nacl, urea, creatinine, ammonia, amino acids,etc.¹⁶. The amount of excretion of the metabolic wastes is less in sweat when compared to other excretory organs but it is one among the instant and effective path of excretion.

In Ayurveda, *Sweda* is considered as both *Mala* and *Upadhatu*. *Sweda* is considered as the *Upadhatu* because of its function – *Kleda Vidhrithi*(maintaining the moisture) / *Klesha Vidhrithi*(Support the hair health)¹⁷. Though there is difference in opinion in regards to *Kleda* and *Kesha* but according to Ashtanga Sangraha both can be considered. Here *Kleda* can be implied as both the moisture of the skin and also the maintenance of homeostasis of body fluid.

Anatomically there are 3 glands in the skin Eccrine, Apocrine and Sebaceous glands. Eccrine gland secretes Nacl, urea, creatinine, ammonia, amino acids, etc and under the control of nervous system. The Eccrine glands primarily responds to the thermal stimuli particularly the increase in core body temperature¹⁸. In classics too *Samana Vata* and *Vyana Vata* are considered to be the one that resides in the *Swedavaha Srotas* and thus helps in the regulation of the sweating^{19,20}. They have thermoregulatory function²¹.

On the other hand the apocrine glands become active after puberty under the influence of sex hormones²² secrete oily, viscid, milky secretion. Unlike sweat gland the sebaceous gland secretes Sebum which is rich in fatty acids, cholesterol, triglycerides, wax esters etc. Sebum production is stimulated primarily by androgens. Thus both Apocrine and Sebaceous glands have role in providing lubrication of the skin. Also both this glands

are under the influence of sex hormones which are lipid derivatives which justifies *Meda* as the *Moola* for *Swedavaha Srotas* to some extent.

All the 3 glands have action of thermoregulation of the body both during summer and winter in order to maintain the homeostasis. *Sweda* has role in the water and electrolyte balance which is well explained in classics where the symptoms that appear just after excess *Sweda* are related to that of dehydration and electrolyte imbalance²⁴. In the role of absorption, maximum absorption takes place through the hair follicle that can easily absorb lipid soluble substances. In Ayurveda, when considered treatments like *Udhvarthana*, *Romakoopa* is the one that acts as the primary site for its action and it is one among the line of treatment for *Sthaulya* that decreases the body fat. This suggest the role of *Sweda* as *Upadhatu*. *Sweda* is one among the *Trimala*, since it has the role in excretion of excess water and other substances like NaCl, urea, lactic acid, creatinine, ammonia, amino acids, etc. which in turn helps in excreting the toxics for the body as well has role in maintaining homeostasis of the body.

Conclusion –

Thus *Sweda* helps in maintaining the homeostasis of the body with the changes in the internal and external environment. It has role in thermoregulation, excretory and protective function. Hence it can be considered as both *Mala* and *Upadhatu*.

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