



UNDERSTANDING SWEDA MALA: PHYSIOLOGICAL IMPLICATIONS AND AYURVEDIC PERSPECTIVES ON SWEATING

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ABSTRACT **Background:** The concept of 'Mala' in Ayurveda is distinctive. Throughout the digestive process, both at macro and micro levels, certain by-products are generated in the body as Mala (waste materials). Mala is the one which is cleared out or purify the body. Failure to expel the mala on a regular basis can potentially harm the body. Sweat, known as 'sweda' in Ayurveda, is one among the trimalas. It is the watery exudate within the entire body excreted through the hair pockets. Ayurveda identifies various substances that influence the normal functioning of the body and one of them is the regular elimination of sweat. **Aim:** To explore the significance of the concept of sweda mala. **Materials And Method:** The literature review was compiled from available *Ayurvedic* texts such as *Samhitas*. The search for articles was also conducted on online databases including PubMed and Google scholar with keywords –Sweda and Sweat. **Conclusion:** If waste products are not expelled the metabolic process becomes impaired, ultimately resulting in the development of malformed tissues. This review regarding sweda mala can also be linked to perspiration in modern science.

KEYWORDS : Mala, sweda, Swedovaha srotas, Dhatu

INTRODUCTION

Through the digestive process, certain by-products are generated in the body as waste materials known as "malas," which need to be expelled out. The term "mala" originates from "Malinikaranath malah,"¹ signifying substances that can induce intoxication. These waste products include purisha, mutra, and sweda, and it is essential to regularly eliminate them from the body for maintaining good health. Under normal conditions, they contribute to well-being, but if contaminated, they results in health risks. Ayurveda typically categorizes malas into two types: Ahara mala and Dhatu mala. The ahara malas, namely purisha, mutra, and sweda, constitute the three primary malas in Ayurveda.²

Sweat, known as 'sweda' in Ayurveda, is one of the trimalas. The word 'sweda' literally translating to vapor. The phenomenon responsible for inducing sweat is referred to as 'swedana.' Sweating is the body's natural mechanism for eliminating toxins through the skin's pores in the form of perspiration. This natural process helps regulate body temperature by dissipating excess heat and cooling the body. However, excessive sweating may signal an underlying health condition, a condition termed as Hyperhidrosis.

MATERIALS AND METHOD

The literature review was compiled from available *Ayurvedic* texts such as *Samhitas*. The search for articles was also conducted on online databases including PubMed and Google scholar with keywords – Sweda and Sweat.

SWEDA AND ITS ORIGIN

Mala is defined as the one which is cleared out or purify the body. Mala referred to as Aatmabala by Acharya Bhela. Acharya Yogaratnakara explains, Life depends on mala. Mala is categorized into three types: Ahara mala, Dhatu mala and Shareera mala. Charaka has mentioned Ahara mala as mutra and pureesha. But chakrapani has commented ahara mala includes mutra, pureesha and vayu.⁴ Dhatumala include the mala's of each dhatu's they are kapha, pitta, kha mala, sweda, kasha loma, netra mala and snehamsha of twak.⁵ Shareerika mala includes Mutra, pureesha and sweda.⁶ The meaning of sweda is vapour. The synonyms of sweda include gharma, seka, dushika, medo mala and nidagha. Sweda can be explained as one of the liquids in the body which takes its origin from medas.⁷

QUANTITY AND PATHOLOGICAL ASPECT OF SWEDA

The quantity of sweda is 10 anjali.⁸ The excessive sweda causes Itching and foul smell of the skin and excessive sweating.⁹ In decrease of sweda there occurs blockage of hair follicles, falling of hairs, dryness of skin, abnormal tactile sensation, roughness of skin and scanty perspiration.¹⁰

SWEDA Carrying Channels

The root of swedavaha srotas include meda and romakupa. The channels carrying sweda get vitiated due to excess of exercise, exposure to excess heat, inappropriate use of hot and cold substances and due to emotions such as anxiety, anger, grief and fear. The symptoms of their affliction are loss of perspiration, excessive perspiration, excessive smoothness, excessive burning sensation and horripilation.¹¹ Sweda is carried and excreted through eight obliquely spread dhamani's. Treatment of swedavaha srotodushti is similar with the management of jwara.

Functions Of SWEDA

Charaka states that water designated as lasika, in the condition of a wound in the skin is excreted through the hair pockets as sweda.¹² Sweda is responsible for maintenance and complexion of the skin.¹³ It maintains body temperature, prevents vatic disorders and also excretes the different toxins from the body.

SWEDA Pravriti

Swedovaha srotas is the functional site of samana vayu¹⁴ and the sweda pravriti is one among the function of vyana vayu.¹⁵ Vyana vayu helps in excretion of sweda from the body, Conduction of sweda from the root of hair, helps in opening the skin pore and secretion of sweda occurs. Hence the sweda pravriti is regulated by samana and vyana vayu. As per charaka, In hemanta rtu the exposure of cold leads to vata vriddhi which causes the closure of body pores thus prevents the external heat loss and the heat gets internalized resulting in increase in power of digestion and metabolism.¹⁶ Similarly exposure to cold leads to sympathetic stimulation causing increased metabolism, heat production and vasoconstriction in skin which prevents the heat loss.

SWEATING And The Three DOSHAS

Sweat is associated with the pitta dosha¹⁷ which is why individuals with a predominant pitta constitution tend to perspire more.¹⁸ Episodes of anger or high stress, exposure to intense sunlight, and other factors can trigger sweating, thereby elevating pitta dosha in the body. Conversely, the act of sweating reduces kapha and vata doshas. As a result, individuals with kapha and vata body types generally experience less perspiration compared to those with a predominant pitta body type.¹⁹

SWEDA In Prevention Of Diseases

The daily regime involves many measures to arrest the impaired hygiene conditions related to sweda. The daily regime interventions like bath, cleaning body are directed towards removal of odour due the sweda. The appearance of sweda or swedagama is also an indication to stop exercise denoting it as an important aspect of physical endurance or stress.

SWEDA In Diagnosis Of Diseases

Sweda is an important diagnostic indicator of impaired meda dhatu

agni and body temperature. Excess sweating is a feature of atisthoulya, jwara, udara roga. Excess sweating is present as clinical sign of kushtha, pittaja pandu, tamaka shwasa & vatarakta. Lack of sweating is present in conditions like eka-kushtha, vatarakta. Sweating is a prodromal sign of prameha and kushtha.

Importance Of SWEDA

Sharangadhara has explained sweda as the upadhatu of medas. Deepika commentary of sharangadhara explains sweda as the salty secretion from the twak.²⁰ Jala mahabhoota is predominant in sweda.²² Sweda is considered as sthana of pitta dosha. Acharya bhela included Sweda in dasapranayathana. Acharya charaka mentioned about 10 drugs which has sweda producing property²³

Concept Of SWEDA In Modern Terms SWEAT

Sweat is a clear, salty liquid produced by glands in the skin. The sweat consists of water, ions (mostly Na and Cl), urea, uric Acid, ammonia, amino acids, glucose, and lactic acid.

FUNCTIONS

Sweat loss is one of the main mechanism regulating the temperature of the body. Thus it controls body temperature, cools the body and moistens the skin. 24

Sweat Glands/Sudoriferous Glands

Sweat glands are of two types they are Eccrine glands and Apocrine glands.

Eccrine Glands Apocrine Glands Sebaceous Glands/ Oil Glands

It secrete **sebum** (mixture of triglycerides, cholesterol, proteins and inorganic salts).²⁵

Functions Of SEBUM

Sebum Coats the surface of hairs and helps them from drying and becoming brittle.⁶ Prevents excessive evaporation of water from the skin, keeps the skin soft and inhibits the growth of bacteria

Sweating

Sweating is the release of a salt-based fluid from the sweat glands. It helps to regulate the body temperature. Also called as perspiration and diaphoresis. There are different types of sweating. They are Thermoregulatory sweating, Insensible perspiration, Sensible perspiration, Emotional sweating, Gustatory sweating (Auriculo temporal syndrome).

Temperature Regulation

The body for the purpose of thermoregulation is divided into 2 parts. The shell and the core. In hot environment, two things happen they are; cutaneous vasodilatation occurs and heat generated by the core (eg. By the liver) is conveyed via the blood and this heat arrives the skin and the heat is dissipated to the environment then body (i.e. The core) is cooled. The sweat glands of the skin produces sweat, sweat is then evaporated. Evaporation takes away the latent heat. The blood from the core reaches the skin and skin is cooled. Cold blood is returned to the core into the hair follicles. In cold environment, cutaneous vasoconstriction develops and core blood (which is warmer) cannot reach the skin, internal heat will be preserved and the Production of sweat decreases.²⁶

Sweating And Its Regulation By The Ans

Stimulation of the anterior hypothalamus pre-optic area in the brain either electrically or by excess heat causes sweating. Nerve impulse from this area are transmitted in the autonomic pathways to the spinal cord and then through sympathetic outflow to the skin everywhere in the body. Sweat glands are innervated by cholinergic nerve fibers and this gland is also stimulated some extend by epinephrine /norepinephrine circulating in the blood.

Acclimatization Of Sweating Mechanism

It is an adaptation which occurs following prolonged exposure to high environmental temperature. Acclimatization occurs due to increased secretion of aldosterone. Aldosterone increases absorption of Na⁺ and Cl⁻ from the duct, this reduces the excretion of salt.

Applied Aspects Of Sweating HYPERHYDROSIS

It is an unknown widespread "silent" disorder which is defined as

excess sweating. Primary idiopathic hyperhidrosis is due to unknown cause. In the majority of cases, the hyperhidrosis is localized. Secondary hyperhidrosis is due to an underlying health condition, such as obesity, gout, menopause, tumour, mercury poisoning, diabetes mellitus, or hyperthyroidism. Hyperhidrosis symptoms are so severe that causes discomfort and anxiety.²⁷

Treatment

- Iontophoresis
- Anticholinergic drugs which inhibits the transmission of parasympathetic nerve impulse.
- Botulinum toxin (Botox injections) which blocks the nerves that trigger the sweat gland.²⁸

HYPOHYDROSIS is a disorder in which a person exhibits diminished sweating in response to appropriate stimuli. Causes includes Medications like opioids, barbiturates, Physical agents like burns, radiations, surgery, scars, Neuropathic disorders like Guillain Barre syndrome, Horner's syndrome.²⁹ The treatment options for Hypohidrosis is limited. Those with Hypohidrosis should avoid drugs that can aggravate the condition. In disease condition, one should treat the underlining diseases.

DISCUSSION

Mala's represent the fundamental principles upon which Ayurveda is built. Fortunately, this ancient science of Ayurveda has disseminated numerous principles and strategies related to managing diseases, with the ultimate goal of restoring health. Human physiology functions normally, but when disturbances arise within it, pathology occurs. Therefore, understanding Ayurvedic physiology becomes paramount. Malas are, in fact, the body's waste products, and their proper elimination is indispensable for preserving an individual's well-being, as failure to expel these waste products can lead to various illness.

CONCLUSION

This review regarding sweda mala, which can also be linked to perspiration in modern science, contributes to a deeper comprehension of Twacha and diseases, ultimately enhancing patient care and recovery.

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