



SWEDANA THERAPY A HOPE FOR MEDOPRADOSHHAJA VIKARA W.S.R. CHRONIC KIDNEY DISEASE (CKD) PATIENTS

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ABSTRACT *Swedana* (sudation) therapy is a process which has a dual role in *panchkarma* as well as *pradhan karma* in relevance to *panchkarma* and the treatment of various *vata-kaphaja* and *medopradoshaja vikara*. *Swedana* helps to relief stiffness heaviness and coldness of the body and makes the body to perspire. It removes toxins from the body through hair follicles present all over the skin. The perspiration brought about by the *swedana* is more than the normal. *Swedana* is preventive, supportive as well as therapeutic. *Acharya charak* has mentioned the root of origin of *swedavaha srotas* (channels) lies in *Meda* (fat, lipids, Adipose tissue) and *lomakooop* (minute pores of the skin located around base of hair follicles). *Sweda* is considered to be excreta (Mala) of *meda dhatu*. The root of origin of *medovaha srotas* (channels) are *Vrikka* (kidney) and *vapvahana* (peritoneal membrane). The *Vrikka* (kidney) is originated from *prasada bhag* of *Rakta* (Blood) and *meda*. In Chronic kidney disease (CKD), the hemodynamics of the kidney is hampered which leads to accumulation of toxins and unfiltered excretory wastes. So with the help of *swedana* the hemodynamics of kidney and the body is improved which facilitates the expulsion of accumulated toxins through activation of sweat glands to produce more sweat. It causes *apana vata anulomana* which further facilitates micturition. In this article you will come to know the relevance of *swedana* in chronic kidney disease (CKD) patients.

KEYWORDS : *Swedana*, Chronic kidney disease (CKD), *Medopradoshaja roga*.

INTRODUCTION

About one in ten people have chronic kidney disease (CKD) in the world. Chronic kidney disease (CKD) was the cause of 956,000 deaths globally in 2013, up from 409,000 deaths in 1990. As of 2020 a rapidly progressive CKD, unexplained by DM and HTN, has increased dramatically in prevalence over a few decades^[1]. The sure-shot treatment of chronic kidney disease (CKD) has not been found. Patient has to go for number of dialysis in severe cases which is economically challenging for poor and middle class people. So Ayurveda can be effective and handy in management of chronic kidney disease (CKD). Ayurveda is the ancient medical science which existed in human societies before the application of modern science to health. It is a first medicinal system to incorporate the promotive health care management. Promotive and preventive measures help in prevention of infectious diseases, pandemics, metabolic diseases, lifestyle disorders, seasonal diseases and even genetic diseases too^[2].

As *Ayurveda* considers the human beings as a part of nature, the management of chronic kidney disease (CKD) also lies in nature i.e. within the principles of *Ayurveda*.

Medopradoshaja Vikara

Medovaha srotas is a *Dhatuvaha srotas* which is a *srotas* (channels) of *Sthira dhatu*. *Asthira dhatu* (*poshaka dhatu*) of *medovaha* can be considered as a circulatory lipids and whereas body fat or adipose tissue can be considered as *Sthira medodhatu*. *Sthira medodhatu* is located in *Udara Pradesha*, *anvasthi* (cartilage), *vrikka* (kidney), *vapvahan* (omentum), *kati* (pelvis) etc.^[3]. The root of origin (*srotomoola*) of *medovaha srotas* mentioned by *Charaka* as '*vrikka vapavahanam*'^[4] i.e. kidney and omentum and by *Sustruta* as '*kati vrikka cha*'^[5] (i.e. kidney and pelvis). In both the texts, the common factor is *vrikka* (kidney) which is located in the bed of the fatty or adipose tissue. Though *vrikka* plays a role in the metabolism of fat, its chief function is mostly concerned with elimination of metabolic end products and equilibrium of the body. *Vrikka* is considered as *moola* (root of origin) of *medodhatu* may be because they are formed by *Prasada bhag* of *rakta* (blood) and *medas* (fat).

Medodhatu dusti lakshanas can be summarized as:-^[6]

1. Systemic generalized *medodhatu vriddhi* i.e. *Sthaulya*
2. *local* (*ekadeshya*) *vriddhi* i.e. *medogranthi*, *arbuda* etc.
3. Increased circulatory lipoproteins (*asthaya poshaka medodhatu*).
4. *Talushoja* (dryness of palate)
5. *Pipasa* (thirst)
6. *Prameha purvarupa* as well as *upadrava*.

As it is mentioned earlier though *Vrikka* is *moola* of *medodhatu*, its chief functions are pertaining to *mutrautpatti* by filtering wastes and

extra water from blood and excretion of these toxins and metabolic wastes with the help of '*Apana Vayu*' (genito-urinary system)^[7]. In diseased condition of *vrikka* when there is obstruction in excretion of urine (i.e. *Mutrardha/mutakrichha*) *Acharya Harita* has mentioned '*sarva swedanam cha*'^[8] (whole body sudation/*swedana*) as its treatment. Whereas *Bhaisajyaratnavali* has mentioned '*Tato virekah swedash cha tatha mutralam uttamam*'^[9] i.e. to use the drugs which expel out the waste from the body in the form of loose stool as well as *swedana* (sudation therapy) being the *uttama* (best) line of treatment in *vrikka* (kidney) *roga*.

Chronic Kidney Disease (ckd)

It is mentioned earlier that *vrikka* is originated from *prasada bhaga* of *Rakta* (blood) and *meda* (fat, lipids and adipose tissue). Whereas kidney develops from within the intermediate mesoderm under the timed or sequential control of a growing number of genes^[10]. Adipose tissue (*medadhatu*) is also mesodermal in origin, blood, blood vessels, capillaries are also mesodermal origin. So the root origin of kidney (*vrikka*), blood (*rakta*) and Adipose tissue (*medas*) are same from modern point of view.

Under the influence of vascular endothelial growth factor A, penetrating endothelial cells form capillaries with surrounding mesangial cells that differentiate into a glomerular filter for plasma waste and solute^[11]. This shows the origin of kidney (*vrikka*) from *rakta* (blood).

Chronic kidney disease (CKD) encompasses a spectrum of different pathophysiological processes associated with abnormal kidney function and a progressive decline in glomerular filtration rate (GFR)^[12]. The term end stage renal disease (ESRD) represents a stage of Chronic kidney disease (CKD), where the accumulation of toxins, fluid and electrolytes normally excreted by the kidneys results in uremic syndrome. This syndrome may lead to death unless the toxins are removed from the body^[13]. And for this *swedana* is most efficient therapy in *Ayurveda*.

Common Causes Of Chronic Kidney Disease (ckd)^[14]

Disease	Proportion	Comments
Diabetes mellitus	20-40%	Large racial and geographical differences
Interstitial diseases	20-30%	Often drug-induced
Glomerular diseases	10-20%	IgA nephropathy is most common
Hypertension	5-20%	Casualty controversial, much may be secondary to another primary renal disease

Systemic inflammatory diseases	5-10%	Systemic lupus erythematosus, vasculitis
Renovascular disease	5%	Mostly atheromatosis may be more common
Congenital and inherited	5%	Polycystic kidney disease, Alport's syndrome
Unknown	5-20%	

Stages Of Chronic Kidney Disease (ckd) ¹⁵¹

Stage	Definition	Description	Prevalence	Clinical presentation
1	Kidney damage with normal or high GFR (>90)	Normal function	3.5%	Asymptomatic
2	Kidney damage and GFR 60-89	Mild CKD	3.9%	Asymptomatic
3A	GFR 45-59	Mild to moderate CKD	7.6% (3A and 3B combined)	Usual asymptomatic. Anaemia in some patients at 3B Most are non-progressive or progress very slowly
3B	GFR 30-44	Moderate to severe CKD		
4	GFR 15-29	Severe CKD	0.4%	First symptoms often at GFR <20. Electrolyte problems likely as GFR falls.
5	GFR < 15 or on dialysis	Kidney failure	0.1%	Significant symptoms and complications usually present. Dialysis initiation varies but usually at GFR <10.

SWEDANA

The word *swedana* is derived from the root 'svid' with 'dhy' *pratyaya* with the addition of *bhava vachaka 'nich'* and '*ach*'¹⁶¹. The one meaning is to 'ripe' or 'cook' and another meaning is perspiration. *Swedan karma* is the next important and essential *purvakarma* after *snehana*. It is also important *pradhana karma* for the treatment of *medopradoshaja vikara*. And a prime modality of treatment for number of disorders especially *vata-kaphaja* predominant diseases. It is done to liquefy the vitiated *dosha* which are spread throughout the body. *Sweda* is the mala of *meda dhatu* and its karma is *kleda dharana*¹⁷¹. Administering sudation especially after *snehana* (oleation), controls *vata* and prevents stagnation of *faeces*, urine as well as semen¹⁸¹. It kindles the digestive fires, softens the limbs, clears the skin, relish for food, clears the channels, destroys the somnolence and drowsiness and restores functions of joints are the benefits which result from an application of *Swedana* therapy¹⁹¹. By *swedana* consolidated *Kapha* gets liquified in the channels and the channels becomes soft and the *Vata* moves in its natural pathway (*Vata anulomana*). As the ice on the top of the mountain gets liquefied by the sunrays so as the *Kapha* accumulated in the *Srotas* (channels) gets liquefied by *swedana*²⁰¹.

CLASSIFICATION OF SWEDANA

Trividha Dvandaja Sweda²¹¹ (Ca.Su.14/65)

- On the basis of the use of *Agni* (fire)
 1. *Anagni Sweda*
 2. *Sagni Sweda*
- On the basis of Properties of the drug used.
 1. *Snigdha Sweda*
 2. *Ruksha Sweda*
- On the basis of Site of Sweda
 1. *Ekanga Sweda*
 2. *Sarvanga Sweda*
- On the basis of Site of *Dosha*²²¹ (Ca.Su.14/9)
- 1. *Snidhapurvaka Ruksha Sweda*
- 2. *Rukshapurvaka Snigdha Sweda*
- On the basis of route of administration
 1. *Bahya Sweda* - External fomentation
 2. *Abhyantara Sweda* -

Internal fomentation

- On the basis of action²³¹ (*Dalhana on Su.Ci.32/22*)

1. Samsamana Sweda (Palliative fomentation)-

The *Sweda* used for the pacification of *Dosha* and digestion of *Ama Dosh* is called as *Samsamana Sweda*.

2. Samsodhana Sweda (Purificatory fomentation)-

The *Swedana* used as a preparatory therapy before *Pradhana Karma* like *Vamana*, *Virecana* etc. is called as *Samsodhana Sweda*. The main object of this *Sweda* is to bring *unctuous Dosha* from *Sakha* to *Koshtha*, from there the vitiated *Dosha* are expelled out from the body easily.

- *Tritva Sweda*²⁴¹ (Ca.Su.14/7)
 1. *Mridu Sweda*
 2. *Madhyama Sweda*
 3. *Mahān Sweda*.
- Four types of *Sweda* (Su.Ci.32/3²⁵¹, A.H.Su. 17/1²⁶¹)
 1. *Tapa Sweda*
 2. *Ushma Sweda*
 3. *Upanaha Sweda*
 4. *Drava Sweda*
- Seven types of *Sweda*²⁷¹ (*Harita Samhita chaturtha Sthana* 4/1)
 - a) *Loshtha*
 - b) *Bashpa*
 - c) *Agnijvala*
 - d) *Ghati*
 - e) *Jala*
 - f) *Phala*
 - g) *Baluka*
- Eight types of *Sweda* (*Kashyapa*)²⁸¹
 - a) *Hasta*
 - b) *Pradeha*
 - c) *Nadi*
 - d) *Prastara*
 - e) *Sankara*
 - f) *Upanaha*
 - g) *Avagaha*
 - h) *Parisheka*.
- Ten types of *Anagni Sweda*²⁹¹ (Ca. Su. 14/64-65)
 - a) *Yayama* - Exercise
 - b) *Ushna Sadana* - residing in a warm chamber
 - c) *Guru Pravarana* - Wearing of heavy clothing
 - d) *Kshudha* - Hunger
 - e) *Bahupana* - Excess drinking
 - f) *Bhaya* - Fear
 - g) *Krodha* - Anger
 - h) *Upanaha* - Application of poultice
 - i) *Ahava* - Wrestling
 - j) *Atapa* - Exposure to sun rays

- Thirteen types of *Sagni Sweda*³⁰¹ (Ca. Su. 14/39-40)

- a) *Sankara Sweda*
- b) *Prastara Sweda*
- c) *Nadi Sweda*
- d) *Parisheka Sweda*
- e) *Avagāha Sweda*
- f) *Jentaka Sweda*
- g) *Ashmaghana Sweda*
- h) *Karshu Sweda*
- i) *Kuti Sweda*
- j) *Bhusveda*
- k) *Kumbhi Sweda*
- l) *Kupa Sweda*
- m) *Holaka Sweda*

Properties of Swedana Drug (Ca. Su.22/16) and its mode of action in chronic kidney disease (CKD)

Properties –

Ushna (warm), *Tikshna* (penetrating), *Sara* (spreads rapidly), *Snigdha* (unctuous), *Ruksha* (rough), *Sukshma* (reaches at microcellular level), *Drava* (liquid), *Sthira* (stable) and *Guru* (complex in digestion)³¹¹.

The *swedana* drugs by *ushna* and *tikshna* guna are capable of penetrating the micro circulatory channels (*srotas*) where they activate the sweat glands to produce more sweat. After dilation of micro-channels, *laghu* and *sara guna* of these drugs enable them to act on the *dosha* in the channels, remove the stagnation, making the sticky contents mobile and direct them to move out through micro pores of the skin in the form of sweat resulting in *sroto shodhana* (purification of channels)³²¹.

The important function of *mutra* (urine) is *Kledavahana* (excretion of mucoid metabolites) and that of *sweda* (sweat) is *Kleda vidhriti* (maintenance of moisture)³³¹. These wastes are continuously formed in the body from food and water by bio-chemical and metabolic activities as bi-products after energy formation. In case of chronic kidney disease (CKD) the kidneys are no longer able to remove enough wastes and excess toxins from the body. So here the *swedana* acts as an effective treatment procedure in this case.

In disease state the *srotas* have many types of abnormalities. They are roughened, contracted, hardened or many times don't possess their normal suppleness and elasticity. In such *srotas* even after mobilization, the *dosha* are likely to be obstructed. So it is necessary to make the *srotas* suitable for movement of loosened *dosha*. This is achieved with the help of *swedana* which is supposed to be best for this³⁴¹. *Swedana* by its qualities like *ushna* (hotness) and *tikshna* (sharpness) etc. it increases the metabolic rate on the body. *Ushna guna* of *swedana* dilates the capillaries thus it increases circulation. Increased circulation enhances elimination of waste products³⁵¹.

Vasodilation by swedana-

During *swedana*, heat on the tissues results in rise in temperature. Higher temperature of the blood stimulates thermo-receptors that send nerve impulses to the preoptic area of the brain, which in turn stimulates the heat losing center and inhibit the heat promoting center. Nerve impulses from the heat losing center cause dilation of blood vessels. As a result of vasodilation there is an increased blood flow through the area so that the necessary oxygen and nutritive materials are supplied and waste products are removed or excreted (Clayton's electrotherapy) So, it can be inferred that the *Ushna Guna of Swedana Karma* leads to stimulation of Sympathetic Nervous System and there is vasodilatation (*Sroto Vispharana*). *Ushna Guna* also increases the circulation of *Rasa* and *Rakta* in the body^[36].

1.	Swedavaha srotas moola	Meda, Lomkoopa [37]
2.	Medovaha srotas moola	Vrikka, Vapavahana[38]
3.	Vrikka utpatti	From Rakta and Meda[39]
4.	Mala of meda dhatu	Sweda[40]

CONCLUSION

The glory of Ayurveda lies in its evolution theory of maintenance of health and genesis of diseases. Centuries have come and gone the nature of diseases perhaps has changed, new diseases have appeared and some old ones are almost extinct but *Ayurvedic* principles of maintenance of health stands for all times. As the high prevalence of chronic kidney disease (CKD) is devastating to mankind physically, mentally, socially and economically, *Ayurveda* is hope for management of chronic kidney disease (CKD). In Chronic kidney disease (CKD) patients when kidneys are no longer able to remove enough wastes and toxins from the body, *swedana* therapy can be applied to treat those conditions. As it is said earlier, *Bhaisajyaratnavali* has mentioned '*tato virekaha swedashcha tatha mutralam uttamam*' in *vrikka roga chikitsa adhyaya*. So from this we can infer that *swedana* (sudation) therapy is one of the best treatment modalities in the patients of chronic kidney disease (CKD).

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