

## Contemporary Understanding of Valuka Swedana

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### ABSTRACT

Swedana (Fomentation Therapy), one among the Purvakarmas, is the procedure that aims at inducing sweating in the body by conducting the heat using a heat conductor. In Ayurveda, different types of Swedana procedures are described based on the methods of transferring the heat energy as per the required Dosha condition. Based on the gunas, they are categorised into Snigdha and Ruksha Sweda. Valuka Sweda is a typical Ruksha Sweda done by using Pottali (bolus) prepared with sand. As Silica is the main major constituent of the sand, its thermal properties aids in the transfer of heat energy more efficiently. Being a Bio-Ceramic, sand emits far infrared energy when on being heated during the Swedana procedure. On penetration through the skin; it expands the capillary vessels and helps in elimination of toxins and metabolic wastes. Contemporarily, far infrared energy has various therapeutic benefits which coincide with most of the benefits of Swedana karma explained in Ayurveda.

**Key Words:** Valuka Sweda, Panchakarma, Far-Infrared Radiation, Silica.

### INTRODUCTION

Panchakarma, the fundamental part of Ayurvedic treatment have its role in every therapeutic condition. Two basic purvakarmas namely, Snehana and Swedana, are a prerequisite to the Samshodhana (Purification therapy) or administered independently as main Upakrama [1].

Swedana Karma does provide brief as well as long-term relief in many ailments. It can be graded based on properties, ranging from Ruksha (dry) to Snigdha (lubricating) with its massive amount of variants and combinations with other properties [2].

Ruksha sweda has been given importance as Shamshamaneeya Sweda in Saama Dosha conditions [3].

One of the Ruksha type of Sweda i.e Valuka Sweda (sand fomentation) is used in kaphaja disorders [4] and widely in diseases of Ama origin, Urusthamba, Medoroga etc [5]. Valuka sweda is a fomentation procedure in which the heated sand being wrapped in fine cloth, tied into pottali(bolus) are directly applied all over the affected part of the body.

### VALUKA-SILICA SAND

- 1) Valuka (also known as Sikata) are silicon stones collected from the streams of rivers and converted into small pieces in the form of Granular materials.
- 2) Therapeutic effects of Valuka are - Vata Rogahara (pacifies the diseases of Vata origin), Vrana Ropana (heals

the ulcer), and if used in the form of fomentation, it pacifies the *Sheetata* (coldness) of *Shaaka* (limbs) [6].

- 3) The naturally occurring granular substance, *Valuka* sand contains Silica ( $\text{SiO}_2$  silicon dioxide) as a major component that usually occurs in the form of Quartz.

#### **Thermal Properties of Silica Sand**

- 1) The specific heat of the sand is 0.7 (KJ/ (kg K) ) which is comparatively much lower than water -- 4.1 (KJ/ (kg K) )
- 2) Thermal conductivity of sand is 1.5 W/m.k that is higher than water -- 0.6 W/m.k
- 3) On heating , Silica sand radiates Far infrared energy

#### **Therapeutic Uses of Silica**

- 1) Silica is the essential element abundantly found in skin and connective tissues .It improves the formation of Collagen.
- 2) Silicon plays an important role in bone formation and as supplement in the treatment of bone and connective tissue diseases like Osteoporosis [7].
- 3) Currently, Silica in combination with vitamin C and other minerals is prescribed as collagen-rich food against inflammation and to improve the health of the joints.

#### **DISCUSSION**

##### **1) Thermodynamic Action of *Valuka Sweda***

Thermal properties of a substance influence the temperature surrounding it. Once the substance is heated, the rate at which it transfers the absorbed heat into adjacent material is determined directly by Thermal conductivity and Specific heat capacity.

*Valuka*, because of its low specific heat capacity gets heated up quickly, stores and transfers the maximum absorbed heat; also tremendous change in temperature is observed even on supplying minimal amount of heat. This may be the reason, the most Ruksha form *i.e Valuka Sweda* (predominant in Agni and Vayu Mahabhutas) is indicated in treatment of *Medorogas etc*, as excessive Ruksha and Ushna gunas are required for liquefaction.

Whereas *Drava Sweda* (done by liquids-water or decoctions) is indicated in *Pittaja Rogas* [8]. Because of its higher value of specific heat capacity, liquids *i.e* water needs lot of heat to raise its temperature and imparts mild heat slowly to the body for longer duration. Higher value of thermal conductivity of *Valuka* makes the heat transfer more efficient to the body.

##### **2) *Valuka Sweda* As Infrared Therapy**

Infrared radiation are classified into three based on wavelength in the Electromagnetic Radiation spectrum – Near-infrared, middle infrared and Far-infrared.

- Near infrared (NIR) are used therapeutically by artificial Light sources.
- Sources of Far infrared (FIR) – Sun (the largest source), Human body (largely the energy emitted by the body is FIR), Bio-Ceramic materials – emit FIR at temperature of  $35^{\circ}\text{-}40^{\circ}$  *i.e* normal body temperature

In *Valuka Sweda*, Bio-Ceramic compounds *viz.* Silica in sand radiates far-infrared energy on heating.

Commonly 95% of the radiation applied perpendicularly gets absorbed to the skin.

FIR is perceived by the thermo receptors in the skin, penetrate deep into the body and promote toxin release at the cellular level. It gets down the different layers, nearer to inflammation site without harming the skin. Far infrared facilitates the generation of nitric oxide which is responsible for regulating the blood circulation [9].

Analgesic effect occurs at the cellular level by the conversion of FIR to heat on contact with tissues in the body. Micro vibrations are produced as the heat energy excites the molecules. Through these process, vasodilatation occurs which in turn improves the blood flow in the area. Hence, vital nutrients and oxygen required are restored in the affected part. This mechanism coincides with the precise definition of *Swedana viz. Swedana Karma* eradicates Numbness, Rigidity and Coldness of the body [10].

As the major proportion of all energy emitted by the Human body is FIR, the primary source of energy required to enhance emission of FIR from the *Valuka Pottali* (bolus) is produced from the human body and through the process of heating of *Valuka* at the beginning of procedure.

Human palm emit FIR at the range 8-14 microns .An Ancient Chinese tradition, Palm healing is being practiced On the basis of the healing properties of FIR. Ayurveda, on the other hand, also recommends the use of *Hasta Sweda* (warm hand fomentation) in infants up to four months of age [11].

The Dravya used in *Swedana Karma* possess the *gunas* such as *Ushna* (hot), *Snigdha* (unctuous), *Ruksha* (dry) etc. Extremely opposite *gunas*- *Snigdha* and *Ruksha* – both are mentioned among them. It is because *Swedana karma* is classified based on the *Dosha* predominant state such as *Vata*, *Kapha* and *Vata-Kapha*,

respectively *Snigdha*, *Ruksha*, *Snigdha-Ruksha* type of *Sweda* are used [12].

Hence, *Valuka Sweda* can be considered superior in *Ruksha* category of *Sweda* wherein *Mamsa Pinda Sweda* in *Snigdha* category. And in case, *Snigdha-Ruksha* type of *Sweda* is intended, mild *Snehana i.e Abhyanga* is advised before *Swedana Karma* [13].

*Valuka sweda* is also performed by dipping the *pottali* (bolus) into *Kanji*<sup>14</sup>. *Kanji* (also known as *Dhanyamla*) containing *Nimbuka* (*Citrus acida*) as one of the ingredients has traces of vitamin c and other phytochemicals. Through transdermal absorption, *Valuka* rich in silica and *dhanyamla* may produce the equivalent effects of collagen rich food prescribed in today's scenario.

## CONCLUSION

While Modern science uses the heat therapy in various modes by transferring different degrees of heat superficially or deeply, *Ayurveda* suggests the application of heat with specific attributes and therapeutic effects for a given specific pathology. It does not address the *Swedana* as mere fomentation process but also as the vital therapy that enhances the overall health of the individual. Because of the scientific background, the eternal fundamentals of *Ayurveda* are therefore applicable even in the present era. The knowledge and practice of *Sweda Karma* still needs better understanding in accordance with contemporary science.

## REFERENCES

- 1) Agnivesha, Charaka Samhitha with commentary Ayurveda Dipika by Chakrapani, Varanasi,: Chaukhamba Surabharati Prakashan 2013, Sutrasthana, Chapter no 22, shloka no.4
- 2) Agnivesha, Charaka Samhitha with commentary Ayurveda Dipika by

- Chakrapani, Varanasi,: Chaukhambha Surabharati Prakashan 2013, Sutrasthana, Chapter no 14, shloka no.66
- 3) Susrutha, Susrutha samhitha with Commentaries by Dalhanacharya and Gayadasacharya , Varanasi, Chaukhambha Surabharati Prakashan, 2012 chikitsasthana, chapter no 32, Dalhana commentary of shloka no. 22
- 4) Agnivesha, Charaka Samhitha with Commentary Ayurveda Dipika by Chakrapani, Varanasi,: Chaukhambha Surabharati Prakashan 2013, Sutrasthana, Chapter no 14, shloka no.27
- 5) Vaidya Haridas Sridhar Kasture, Ayurvediya Panchakarma Vigyan, Shri Baidyanath Ayurveda Bhavan Limited, 2015, Pg 156
- 6) Vaidya Yadavji Trikamji Acharya, Rasamritam, English translation , Varanasi chaukamba Sanskrit Sansthan, ,2007, Chapter 6, Pg 123
- 7) R.Jugdaohsingh , silicon and bone health , J Nutr Health Aging 2007 ,11(2)
- 8) Susrutha, Susrutha Samhitha with commentaries by Dalhanacharya and Gayadasacharya, Varanasi, Chaukhambha Surabharati Prakashan, 2012 Chikitsasthana, chapter no 32, shloka no. 14
- 9) Fatma Vatansever, Michael R. Hamblin, Far infrared radiation (FIR): its biological effects and medical Applications, Photonics Lasers Med. 2012, 4: 255–266.
- 10) Agnivesha, Charaka Samhitha with commentary Ayurveda Dipika by chakrapani, Varanasi,: Chaukhambha Surabharati Prakashan 2013, Sutrasthana ,Chapter no 22, shloka no.11
- 11) Vrudhajeetvaka, Kashyapasamhita, Revised by Vatsya, Varanasi: Chaukhambha Sanskrit Sansthan 2016, Sutrasthana chapter 23 shloka 26-27.
- 12) Agnivesha, Charaka Samhitha with commentary Ayurveda Dipika by Chakrapani, Varanasi,: Chaukhambha Surabharati Prakashan 2013, Sutrasthana, Chapter no 14, shloka no.8
- 13) Vaidya haridas Sridhar kasture, Ayurvediya Panchakarma Vigyan, Shri Baidyanath ayurveda bhavan limited ,2015, Pg 157
- 14) Dr Vasant C Patil, Principles and Practice of Panchakarma, chapter 9, Chaukamba publications, 2015, Pg 218