

## National Journal of Research in Ayurved Science

### Review of *twak sharir w. s. r. to padadari*

Yende Mohan R\*.<sup>1</sup>, Gohane Jayashree S.<sup>2</sup> Thosar Sheetal L.<sup>3</sup>

1. Professor & H.O.D. Rachana Sharir, Bhausaheb Mulak Ayurveda College & R. H., Butibori, Nagpur, Maharashtra.
2. M.D. (Rachana Sharir) Scholar, Shri Ayurveda Mahavidhyalaya, Nagpur, Maharashtra.
3. Asso. Professor Department of Dravyaguna, Shri K. R. Pandav Ayurveda College, Nagpur, Maharashtra.

\*Corresponding author: E-mail –[yrmohan1@gmail.com](mailto:yrmohan1@gmail.com) )Mob .9970137300

#### Abstract-

*Padadari* is one of the commonest & most negligible disease. It is observed that people are least bothered about their feet though feet bear the whole body weight. In India 80% of population live in rural area. Most of them work in farms in wet soil and water also. So incidence of cracking the skin of the foot is very common. For management of *Padadari* knowledge of skin is very important. The skin covers the entire external surface of the body, including the external auditory meatus, the lateral aspect of tympanic membrane and vestibule of the nose. Skin forms about 8% of the total body mass. It is one of the largest organs of the body in surface area and weight. In adult, the skin covers an area about 2 square meters and

weighs 4.5-5 kg. Its thickness is 0.5-4mm, depending on location, maturation and ageing. All of Acharyas explain briefly about *Twak Sharir*, in this research article we try to focus on *Twak Sharir*.

Key Words- *Padadari, Twaka, crack heel,*

#### Introduction –

इति षट् त्वचाः। एत ।

षडंग शरिरमवतत्य तिष्ठन्ति ॥

– च .शा . ७/४

It means the skin covers the *Shadang Sharir* (i.e. head, neck, upper and lower limbs, chest and abdomen). According to Sushruta and Vagbhata, after *Shukra Shonita Samyoga, Pachyamanawastha* occurs and seven

layers of *Twak* are formed like cream over milk.

**Synonym-** *Twak*, *Charma*, *Sparshan*, *Sparshanendriya* etc.

**Utpatti** - According to Sushruta and Vagbhata, after *Shukra Shonita Sanyoga*,

*Pachyamanawastha* occurs and seven layers of *Twak* are formed like cream over milk. *Twak* is matruja organ and still it is generated as the sparshanendriya from *Atmaja Bhava*. As per Charaka, *Twak* is also generated during third month as it is *Dnyanendriya*

**Table No. 1 – skin type acc. to Acharya Sushrut Sharir 4/4**

No	Name	Characters	Thickness	Diseases
1.	Avabhasini	1 <sup>st</sup> layer	1/18 of Vrihi	It reflects varna and 5 types of <i>Chava</i> , <i>Sidhma</i> , <i>Padmakantaka</i>
2.	Lohita	2 <sup>nd</sup> layer	1/16 of Vrihi	<i>Tilkalaka</i> , <i>Nyachcha</i> , <i>Vyanga</i>
3.	Shweta	3 <sup>rd</sup> layer	1/12 <sup>th</sup> of Vrihi	<i>Charmadala</i> , <i>Ajagallika</i> , <i>Mashaka</i>
4.	Tamra	4 <sup>th</sup> layer	1/8 <sup>th</sup> of Vrihi	<i>Mahakushtha</i> , <i>Kilasa</i>
5.	Vedini	5 <sup>th</sup> layer	1/5 <sup>th</sup> of Vrihi	<i>Mahakushtha</i> , <i>Visarpa</i>
6.	Rohini	6 <sup>th</sup> layer	1 Vrihi	<i>Granthi</i> , <i>Apachi</i> , <i>Arbuda</i> , <i>Shlipada</i> , <i>Galaganda</i>
7.	Mansadhara	7 <sup>th</sup> layer	2 Vrihi	<i>Bhagandar</i> , <i>Arsha Vidradhi</i> ,

### **Twak and related Dosha-**

**A) Vata Dosha-** *Twak* is one of the main *Sthana* of *Vata Dosha*, which is responsible for sensation of touch, pain, and temperature.

**B) Pitta Dosha-** According to Vagbhata, *Sparshanendriya* is one of the *Sthana* of *Pitta*. It is also *Sthana* of *Bhrajak Pitta*, which gives luster and color to the skin.

### **Twak and related Upadhatu-**

रसात् स्तन्यं ततो रक्तमासृज्जुः कंडरा : सिराः।

मांसात् वसा त्वचा षट्च मेदस्ः स्नयुसंभवः॥

च. चि. १५/ १७

*Upadhatu* of *Rasa*, *Rakta*, and *Meda* are related to *Twak*. *Twak* contains *Sira*, covers *Kandara* and *Snayu*. *Twak* is the *Upadhatu* of *Mansadhatu*.

### **Twak and related Mala-**

स्वेदक्षये रोमच्युतिः स्तब्धरोमात् स्पुटनं त्वचा ॥

अ. हसू .१२/२२

*Twak* is the biggest *Malayana* which contains innumerable *Bahirmukha Strotansi*. Sweat is important mala which is thrown out by *Twak*. Excess sweating and bad odour to sweat are the manifestation of *Sweda Vridhi*.

#### **Twak and Strotas -**

- **Mamsavaha Strotas:** *Twacha* is *Moolasthan* of *Mamsavaha Strotasa*. *Moolasthan* is supposed to govern *Utpatti*, *Vahan* and *Parinamana* of that particular dhatu.
- **Swedvaha Strotas:** *Swedvaha Strotasa* is the part and parcel of *Twacha*. *Romakupa* are also part of *Twacha*.
- **Rasavaha Strotas:** It is also related to skin. Due to *Rasavaha Strotasa Dushti*, hair fall, wrinkles on the skin occurs, along with other symptoms.
- **Raktavaha Strotas:** Similarly *Raktavaha Strotas dushti* produces many skin problems like *Kushtha*, *Visarpa*, and *Pidaka* etc.
- **Twak and Dnyanendriya-** *Twak* is *Adhishthana* of *Sparshanendriya*.

#### **Twak Sara-**

तत्र स्निग्ध श्लक्ष्ण मुदु प्रसन्न .....

प्रहर्षणान्ययुष्यत्वं चाष्टे ॥

च. वि. ८/१०३

Skin of *Twak Sara* person is characterized by glossy, smooth, soft, clear, fine, less numerous, deep rooted and tender hairs and such individual is endowed with happiness, good fortunes, power, enjoyment, intellect, knowledge, health, excitement and longevity

#### **Twak Karma**

1. **Varna-** *Twak* is *Sthana* of *Bhrajak Pitta*, so gives luster and aura to the skin.
2. **Shoshana-** It absorbs the medicine when applied in the form of *abhyanga*, *Lepa*, *Upanah* etc.
3. **Samvarana-** *Twak* is *Upadhatu* of *Mamsa*. So it protects and covers skeleton and muscles.
4. **Malayana-** *Twak* is *Moolasthan* of *Mamsavaha Strotas*. So it regulates formation, maintenance and excretion of wastes of the *Mamsadhatu*. Sweat is excreted through it.
5. **Sparshadnyana-** *Twak* is site of *Vata Dosha* it acts as an organ of sensation. *Twak* is *Adhishthan* of *sparshanendriya*

#### **Modern aspect of Skin -**

##### **Epidermis:-**

It is the thinnest layer, metabolically active, stratified, squamous, cornifying

epithelium that is populated by 4 types of cells.

1. Melanocytes: – (melan – black) which produce the pigment melanin, comprise about 8% of the epidermal cell. Melanin is a brown- black pigment that contributes to skin color and absorbs UV light.
2. Langerhans cells- These arise from bone marrow and migrate to the epidermis. They interact with white blood cells called helper T cells in immune response and are easily damaged by UV radiation.
3. Merkel cells: - These cells are located in the deepest layer. Merkel cells contact with the flattened portion of the ending of a sensory neuron called a tactile disc and is thought to function in the sensation of the touch.
4. Keratinocytes: – (Ker-a-tin-o-cytes- ketrato- horny) about 90% of the epidermal cells are keratinocytes. They produce a protein called keratin. This substance helps in waterproofing and protects the skin and underlying tissues.

The names of five layers of the epidermis from the deepest to the most superficial are,

- I. Stratum basale:
- II. Stratum spinosum (spinosum- thorn like)

III. Stratum Granulosum (Granulum - little grain)

IV. Stratum Lucidum (lucidus- clear)

V. Stratum corneum (corneum-horny)

### **Dermis –**

The dermis mostly of comparatively noncellular connective tissue composed of collagen, elastic fibers and ground substance within which are embedded nerves, blood vessels, lymph vessels, muscles, pilosebaceous apocrine and sweat units. The dermis rests upon a thick pad of subcutaneous fat and is 15-40 times thicker than the epidermis.

The fully formed dermis may be divided into two compartments-

- A thin zone immediately beneath the epidermis ‘Papillary dermis’
- A thick zone of reticular dermis which contains irregularly arranged coarse elastic fibers interspersed between thick collagen bundles that are mostly parallel to the skin surface on the face and neck. Striated muscle is also seen in reticular dermis.

### **Discussion -**

Though the skin is an independent organ at the same time it is in contact with all the organs and system of human body the skin communicates with the organism by means of the nervous system, circulation and endocrine glands.

- **Regulation of the body temperature-** In response to high environmental temperature or strenuous exercise the evaporation of sweat from the skin surface helps lower an elevated body temperature to normal. In response to lower environmental temperature production of sweat is decreased which helps to conserve heat. A change in flow of blood to the skin also helps regulate body temperature.
- **Protection** -The skin covers the body and provides a physical barrier that protects underlying tissues from physical abrasion, bacterial invasion, dehydration.
- **Sensation-** The skin contains abundant nerve endings and receptors that detect stimuli related to temperature, touch, pressure and pain.
- **Excretion-** Besides removing heat and some water from the body sweat is also a vehicle for loss of a small quantity of ions and several organic compounds.
- **Immunity** – Certain cells of the epidermis are important components of the immune system, finds off foreign invaders
- **Blood reservoir–** The dermis houses extensive networks of blood vessels that carry 8 to 10% of the total blood flow in resting adult. In moderate exercise, skin blood flow may increases, which help dissipate heat from the body. During strenuous exercise, following severe hemorrhage and anxiety, however skin blood vessels constrict somewhat, which allows more of the blood to circulate through contracting muscles.
- **Synthesis of vitamin D-** Synthesis of vitamin D begins with activation of a precursor molecule in the skin by UV rays in sunlight. Enzymes in the liver and kidney then modify molecule, finally producing calcitriol, the most active form of vitamin D. Calcitriol contributes to the homeostasis of the body fluids by aiding absorption of calcium in foods from the digestive tract into the blood. Thus vitamin D is a hormone since it is produced in one location in the body transported by the blood and then exerts its effect in another location. For this reason, the skin

can be considered as an endocrine organ

### Conclusion –

*Padadari* is caused due to *Vataprakopak Hetu*, *Atichankramana* and *Ruksha Guna*. In the initial stage of disease patient does not have any complaints. But as the disease progresses, it can lead to severe symptoms as acute pain, and even bleeding from cracks because of this extra attention on skin of feet is very important.

### Reference –

1. Charak Samhita-vol 2, Dr. Ravidatta Tripathi, Chaukhamba Subharati Prakashan Varanasi, edition 2007, Grahani Doshachikitsa Adhyaya, shloka 17<sup>th</sup>, page no 362
2. Ashtanga Hridaya with Arundatta Tika- Editor Hari Paradkar, Published by Choukhamba Publication (2002),chapter 12, shloka 1
3. Charak Samhita vol 1, Dr Bramhanand Tripathi, Chaukhamba Subharati Prakashan Varanasi, edition 2006, Rogbhisagajitiya Adhyaya, shloka 22<sup>nd</sup>, page no 763
4. Book of Sharir Rachana, Shivkumar Gaud, Chaukhamba Subharati Prakashan Varanasi, page no 189
5. Textbook of Rachana Sharir Vol-1, Shimpi Pratibha, Dhanwantari Book Publishers, Nagpur, Revised 2<sup>nd</sup> Edition 2017, page - 80.
6. Essential of medical physiology, K. Sembulingam, edition 3<sup>rd</sup> 2004, JP brothers publication, page no 279.
7. Textbook of Rachana Sharir Vol-2, Shimpi Pratibha, Dhanwantari Book Publishers, Nagpur, Revised 2<sup>nd</sup> Edition 2017, page - 311.

*Conflict of Interest: Non*

*Article Type: Review Article*

*Source of funding: Nil*

### *Cite this article:*

*Review of twak sharir w. s. r. to padadari*

*Yende Mohan R, Gohane Jayashree S., Thosar Sheetal L.*

*Ayurlog: National Journal of Research in Ayurved Science- 2019; (7) (4): 1-6*