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Review Article

Twak Sharir According to Ayurveda and its Correlation with Skin Diseases: Ayurveda and Modern Consideration

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ABSTRACT

Twak (skin) is one of the important sensory organs (*Dnyanendria*) which receive sense/stimuli through *Adhistanas*. *Twak* generates anticipated response against the stimuli like; *Sparsh* (touch). *Twacha* (skin) not only helps to understand touch sensation but it also covers whole body, protect from shock and perform functioning of thermostat through sweat channels (*swedvahi strotas*). The pores present in skin help in the hair nourishment and detoxification process. It is believed that each and every components of skin having anatomical as well as physiological importance. Therefore any anatomical or physiological abnormalities in skin or related organs may leads various disorders with skin manifestation including psoriasis, acne, leprosy, hyper pigmentation, skin allergy and vitiligo. Present article described structural components of skin and their role in disease pathogenesis.

Keywords: Ayurveda, *Dnyanendria*, *Twak*, Skin, Disorders.

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Introduction

Appearance (Swarup) and layers of skin

As per Ayurveda human body is composite structure of *Dosha*, *Dhatu*, *Updhatu* and *Mala*. *Twacha* is one of the *Gyanendriyas* amongst five considered as *Updhatu* of *Mamsa Dhatu*. Skin is termed as "*Twak*" in ayurveda which covers whole body and the disease associated with skin called *Twacha Rogas*. The skin disorder manifested externally but their route causes existed internally. *Twacha* related with *Doshic* compositions and affected by *Dhatus*, therefore various others diseases also manifested on skin, therefore skin also used as a diagnostic tool for identifying various diseases.

Structural Components of Skin (Modern Perspective):

Skin cover external surface of body including auditory meatus & surface of tympanic membrane. It formed mucous membrane at the orifices of the body, the skin of palms and sole of feet considered as thickest (1.5 mm thick) while eyelids skin is considered as thinnest skin (0.05 mm thick). Melanin, melanoid, carotene, haemoglobin & oxy haemoglobin are major pigments of skin which present through various layers of skin.

Origin of Twak Sharir:

Formation of *Twacha* occurs during "*Garbhanirmati*" when formation and development of *Garbha* take places. *Shukra* & *Shonita* along with others elements involved in *Garbhanirma*. The metabolization of *Shukra* & *Shonita* by *Tridosha* considered as prime factor for the formation of *Twacha*.

Layers in Twacha Sharir

Ayurveda *Samhita* described several layers of *Twacha* and each layers having specific role physiological functioning and any disturbances in these layers initiates pathogenesis of various skin disorders. The various layers of skin found among *Atreya* and *Dhanwantri* denomination. The structural descriptions of various skin layers are as follows:

❖ First layer of skin & its involvement in Twak Roga

The first outermost layer is termed as *Avabhasini*; thickness 1/18th of *Vrihi*. This outermost layer considered as *Twak Roga Adhithana* of *Sidhma* and *Padamkantka*. This layer considered responsible for complexion, as per *Maharishi Charak* & *Vridhdha Vagbhat* first layer holds *Udakdhatu*, carries *Udaka dhatu* and maintain *Aradrata bhava*.

❖ **Second layer of skin & its involvement in Twak Roga**

Sushruta described second layer of skin as *Lohita* which is 1/16th thick of *Vrihi* and considered as *Adhithana* of *Twak Roga* such as; *Tilkalka, Nyacha & Vyanga*. As per *Ghanekar* this layer lies beneath the *Avabhasini* and composed by transparent layer/cells placed below the stratum corneum. This layer holds blood and prevents outflow of *Rakta dhatu*.

❖ **Third layer of skin & its involvement in Twak Roga**

Acharya Sushruta mentioned third *Twacha stara* as *Shweta* since it is *Shweta varniya* in appearance, it is 1/12th thick of *Vrihi* and considered *Adhithana* for *Twak Roga* such as; *Ajagalika, Charmadal & Mashak*. As per *Ghanekar* this *stara* lies just below the *Lohita* and made up by different layers of granular cell. This layer described as a prime location of *Sidhma & Kilas*.

❖ **Fourth layer of skin & its involvement in Twak Roga**

Fourth layer of *Twacha* described as *Tamra*, having thickness of 1/8th of *Vrihi* and lies beneath the *Shweta*. It is considered *Adhithana* for *Twak Roga* such as; *Kustha* and *Kilas*. *Sharangdhara* and *Bhavprakash* described this layer as site for *Kilas Shivtra*. *Ghanekar* mentioned that fourth layer may be correlated with Stratum Malphigi. The fourth layer of skin involve in etiopathogenesis of leucoderma since cessation of melanin in leucoderma associated with Stratum Malphigi.

❖ **Fifth layer of skin & its involvement in Twak Roga**

The next *Stara* of *Twacha* described as *Vedini* by *Sushruth*. It is 1/5th thick of *Vrihi* and sensitive to perceptions of touch, heat and cold. It is considered as *Adhithana* of *Twak roga* such as; *Kustha* and *Visarpa*. Similarly *Charak & Vagbhat* considered this layer of skin responsible for *Alaji & Vidradhi*. This skin layer performs function of perception of sensation since it consisted of corpuscles and nerve endings.

❖ **Sixth layer of skin & its involvement in Twak Roga**

Sushruta described sixth layer of skin as *Rohini*, it is equal to one *Vrihi* in thickness. This layer may be correlated with reticular layer of dermis since it lies beneath the *Vedini* (fifth layer). This layer considered *Adhithana* of *Twak roga* like; *Granthi, Galganda, Apachi* and *Arbuda*. Injury to this layer may lead *Tama Pravasha*; darkness in front of eye for short period of time. This layer helps in tissue granulation process thus perform function of wound healing (*Vrana Ropana*).

❖ **Seventh layer of skin & its involvement in Twak Roga**

The seventh layer of skin described as *Mansadhara* and it is equal to two *Vrihi* in thickness. It is considered *Adhithana* of *Twak Roga* such as; *Vidradhi, Bhagandara & Arsha*. However some ayurveda literature considered only sixth skin layer and denies presence of this seventh layer.

Correlation between skin and Dosh predominance Lakshan:

Sparshanendriya i.e. *Twacha* generally described as site of *Vata & Pitta* predominance. Therefore *Twacha* possesses relationship with the *Tridoshas* and any imbalances (*Kshaya & Vriddhi*) in *Doshas* may be seen on *Twacha* in terms of sign and symptoms as follows:

- Hyper pigmentation of skin and discoloration of skin may be observed as *Vata-Vriddhi Lakshan* and *Pitta Vriddhi Lakshan* respectively.
- *Pitta Kshaya Lakshan* involves loss of glory & coldness of skin.
- Similarly whitish appearance of skin and coldness of skin may be observed as *Kapha Vriddhi Lakshan* on skin.
- Dryness of skin and burning sensation may be considered as *Kapha Kshaya Lakshan*.

Table 1: Modern Concept of Skin Layer and Associated Diseases:

S. No.	Skin Layer as per Modern Concept	Diseases involved
1	Epithelial layer	<i>Sidhma, Padmakantak</i>
2	Stratum Lucida	<i>Tilkalak, Nyachchha, Vyang</i>
3	Stratum granuloma	<i>Ajagallika, Charma dala</i>
4	Malphigian layer	<i>Kilas, Kushta</i>
5	Papillary layer	<i>Kushta, Visarp</i>
6	Reticular layer	<i>Apachi, Arbud, Shlipad, Galganda</i>
7	Subcutaneous layer	<i>Bhagandar, Vidradhi, Arsh</i>



Figure 1: Various structural components (layers) of skin**Drugs useful in skin diseases:**

Anjeer, Amaltas, Erandakarkati, Eranda, Tuvaraka, Kampilak, Kapoor, Kalonji, Palasha, Nagkesar and Neem.

Conclusion

Classical texts and modern texts of medical science described skin components in similar way however some minor variations may observed related to layers of skin. The traditional text of ayurveda mentioned diseases specific to particular skin layer. Skin not only protects internal organs of body from external stimuli but it's also responsible for colour, complexion and pigmentation of body. This article emphasized that a physician must be aware about involvement of particular skin layer in specific skin disease so that disease cured selectively.

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