



A Comprehensive Review of 'Twak' in Ayurveda

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Abstract : Twak, or skin, is a critical organ in Ayurvedic medicine, serving as the body's protective covering and a primary sensory organ. This comprehensive review explores Twak's etymology, definition, and synonyms, highlighting its multifaceted roles. Drawing from classical Ayurvedic texts such as the Charaka Samhita, Sushruta Samhita, and Ashtanga Hridaya, the review delves into the genesis, layers, thickness, and functional anatomy of Twak. The complex interplay between Twak and the three doshas (Vata, Pitta, Kapha) and its relationship with the seven dhatus (body tissues) are examined. The review also addresses Twak's Panchabhautik constitution (five elements) and its role as a sensory organ. Integrating ancient Ayurvedic wisdom with modern dermatological understanding can enhance holistic approaches to skin care and treatment.

IndexTerms - Twak, Ayurveda, skin, Charaka Samhita, Sushruta Samhita, Panchamahabhuta, Gyanendriya, Dhatu, Swedavaha Srotas, Mamsavaha Srotas, Ayurvedic dermatology.

1. Introduction

The skin, or "Twak," holds a significant place in Ayurvedic literature, reflecting its essential role as the body's outer covering and sensory organ. Twak is not only considered the physical barrier protecting the internal tissues but also serves crucial functions in sensory perception and physiological processes. This review aims to provide a comprehensive analysis of Twak based on classical Ayurvedic texts, incorporating ancient verses and their interpretations.

Etymology and Definition

Etymology

The term "Twak" is derived from the root "Twag+kwip," which implies the function of covering the body.

त्वक् संवरणेधातु+तत्प्रत्यय – शब्दस्तोम महानिधिः

According to Amarkosha, Twak denotes a covering, indicating its primary function as the body's external layer.

Definition

Twak is defined as the external covering of the body, enveloping all internal organs and tissues.

“त्वचतिसंवृणोतिमेदशोणितादिकमिति – शब्दकल्पद्रुमः

This definition highlights its protective role, covering the Meda (fat), Shonita (blood), and other Dhatus (tissues).

Synonyms of Twak

Various synonyms for Twak emphasize its multiple functions and characteristics:

1. Twak: Covering of the body.
2. Charma: Derived from "Chara," meaning movement, indicating its flexibility.
3. Chhavi: Illuminates complexion, reflecting the skin's role in determining one's appearance.
4. Chhadani: Envelops all organs, highlighting its protective nature.
5. Sparshan: Provides tactile sensation, a primary sensory function of the skin.
6. Asrukdhara: Holds the blood, preventing bleeding.

Twak Utpatti (Genesis of Twak)

Sushruta's Perspective

Acharya Sushruta describes the formation of the seven layers of Twak during the development of the embryo, comparing it to the formation of cream on heated milk.

स्तस्य खल्वेवंप्रवृत्तस्य शुक्रशोणितस्याभिपच्यमानस्य क्षीरस्येव सन्तानिकाः सप्त त्वचो भवन्ति।८

- सु. शा. 4/4

Vagbhata's Perspective

Similarly, Acharya Vagbhata mentions that the seven layers of Twak develop from the Paka (metabolic transformation) of Raktadhatu (blood tissue).

“तत्रासृजः पच्यमानस्य क्षीरस्येव सन्तानिकाः षट्त्वचो भवन्ति।“

- अ.स. शा. 5/17

Charaka's Perspective

Acharya Charaka does not provide a specific description of Twak genesis but acknowledges that all body structures, including Twak, derive from the Shadbhavas (six elements), emphasizing its maternal origin.

Number and Types of Twak

Controversy in Number

There is a notable discrepancy among Ayurvedic texts regarding the number of Twak layers. While Charaka and Vriddha Vagbhata describe six layers, Sushruta and others, including Laghu Vagbhata, Sharangdhar, and Bhavaprakash, mention seven layers.

Charaka Samhita

Acharya Charaka details six types of Twak, each with specific functions and associated disorders:

1. Udakdhara: Holds Rasa Dhatu and Lasika (lymph).
2. Asrukdhara: Contains blood vessels and holds blood.
3. Third Layer: Associated with the manifestation of Sidhma and Kilasa.
4. Fourth Layer: Related to Dadru and Kushtha.
5. Fifth Layer: Seat of Alaji and Vidradhi.
6. Sixth Layer: Causes severe pain and fainting when excised; associated with Arunshi (boils) and severe ulcers.

“शरीरे षट्त्वचः तद्यथा - उदकधरात्वग्बाह्या ...”

- च. शा. 7/4

Sushruta Samhita

Acharya Sushruta describes seven layers of Twak, detailing their thickness and the specific skin disorders associated with each layer:

1. Avabhasini: Reflects colors and glow; seat of Sidhma and Padmakantaka.
2. Lohita: Contains blood vessels; seat of Tilakalaka, Nyacha, and Vyanga.
3. Shweta: Seat of Charmadala, Ajagallika, and Mashaka.
4. Tamra: Seat of various types of Kushtha and Kilasa.
5. Vedini: Seat of Kushtha and Visarpa.
6. Rohini: Seat of Granthi, Apachi, Arbuda, and Shlipada.
7. Mamsadhara: Thickest layer; seat of Bhagandara, Vidradhi, and Arsha.

“तासां प्रथमा ऽवभासिनी नाम ...”

- सु. शा. 4/4

2. Comparative Analysis

The table below compares the names and characteristics of Twak layers according to different Ayurvedic texts:

	Charaka	Sushruta	Vagbhata	Sharangdhara	Bhavprakash
1	Udakdhara	Avabhasini	Udakdhara	Avabhasini	Avabhasini
2	Asrukdhara	Lohita	Asrukdhara	Lohita	Lohita
3	Tritiya	Shweta	Sidhm Kilasa	Shweta	Shweta
4	Chaturthi	Tamra	Sarva	Tamra	Tamra

			Kushtha		
5	Panchmi	Vedini	Alaji Vidradhi	Vedini	Vedini
6	Shasthi	Rohini	Prandhara	Rohini	Rohini
7	-----	Mamsadhara	----	Sthoola	Sthoola

Pramana (Thickness) of Twak

The thickness of each layer of Twak is described in terms of Vrihi (rice grain) in Sushruta Samhita, with variations according to different body parts.

Below table Shows the comparison of thickness of Twak according to Sushruta and Dalhana

	Twak	Sushruta	Modern measurement	Dalhana	Modern measurement
1.	Avabhasini	1/18	0.055	18/20	0.90
2.	Lohita	1/16	0.062	16/20	0.80
3.	Shweta	1/12	0.083	12/20	0.60
4.	Tamra	1/8	0.125	8/20	0.40
5.	Vedini	1/5	0.200	5/20	0.20
6.	Rohini	1	1	1	1
7.	Mamsdhara	2	2	2	2
			Total: 3.525		Total: 5.9

3. Observations

The total thickness according to Sushruta is approximately 3.5 Vrihi (3.5 mm), while Dalhana's interpretation suggests around 6 Vrihi (6 mm). Modern measurements of skin thickness range between 1.5 to 4 mm, aligning more closely with Sushruta's description.

Twak Kriya Sharir (Functional Anatomy of Twak)

Vata Dosha

Twak is one of the abodes of Vata Dosha, particularly Prana and Udana Vayu. Prana Vayu is responsible for tactile sensation, while Udana Vayu influences skin coloration.

“पक्काशयकटीसक्थिश्रोत्रास्थिस्पर्शनेन्द्रियम् । स्थानं वातस्य तत्रापि पक्काधानं विशेषतः ॥”

- अ. ह. सु. 12/1

Pitta Dosha

Twak is also an abode of Pitta Dosha, specifically Bhrajaka Pitta, which governs the skin's complexion and the absorption of substances through the skin.

“त्वक्स्थं भ्रजाकं भ्रजानात्त्वचः ।”

- अ. ह. सु. 12/14

Kapha Dosha

The oily nature of Twak is maintained by Kapha Dosha. A decrease in Kapha leads to dryness and cracking of the skin.

Relation with Saptadhatus (Seven Body Tissues)

1. Rasa: Provides nourishment to Twak.
2. Rakta: Richly supplies blood, making Twak an Asrukdhara.
3. Mamsa: Twak is the root of Mamsavaha Srotas.
4. Meda: Sweat, the by-product of Meda, is excreted through Twak
5. Asthi: Hair and nails emerge from Twak.
6. Majja: The Sneha (unctuousness) of Majja is related to Twak.
7. Shukra: Though not directly related, Twak reflects the vitality of Shukra.

Relation with Mala (Excreta)

Twak is primarily related to Sweda (sweat), which is expelled through the skin.

Twak and Panchmahabhuta (Five Elements)

Twak is composed of all five Mahabhutas:

Below table shows the relation between Twak and Panchbhautik.

Element	Structure
Parthiva	Kesha, Loma, Nakha
Aapya	Rasa, Lasika
Tejas	Kanti, Varna
Vayviya	Sparsha, Sawedna
Akashiya	Lomakoopa, Sweda vahi nalika

Twak and Upadhatu (Secondary Tissues)

Twak is an Upadhatu of Mamsadhatu, with Vasa and Shat-Twak being its secondary tissues.

Twak and Srotas (Channels)

Twak is closely related to Swedavaha Srotas (channels carrying sweat) and Mamsavaha Srotas (channels carrying muscle tissue).

Twak and Varna (Complexion)

Varna (complexion) of an individual is determined by Twak, influenced by the combination of different Mahabhutas during fetal development.

“तत्र तेजोधातुः सर्ववर्णानां प्रभवः स यदा गर्भोत्पत्ताब्धधातुप्रायो भवति तदा गर्भे गौरं करोति ...”

- सु. शा. 2/36

Twak as a Gnyanendriya (Sensory Organ)

Twak is one of the five Gnyanendriyas (sensory organs) responsible for the perception of touch.

“तत्र चक्षुः श्रोत्रं घ्राणं रसनं स्पर्शनमिति पञ्चेन्द्रियाणि ॥

It plays a crucial role in tactile sensation, facilitated by the Vata Dosha, particularly Prana Vayu.

4. Conclusion

Twak, as described in Ayurveda, is a complex structure with multiple layers, each serving distinct physiological and protective functions. Its composition and characteristics are influenced by the three Doshas (Vata, Pitta, Kapha) and the five Mahabhutas (elements). The detailed descriptions in classical texts underscore the significance of Twak in maintaining overall health and its role as a sensory organ. Integrating these ancient insights with modern dermatological understanding can enhance holistic skin care and treatment approaches.

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