

UNDERSTANDING RELATION BETWEEN TWAK AND SHWITRA: A REVIEW

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ABSTRACT

Skin is the largest organ of the body. It consists of three layers of tissues: the epidermis, the dermis and the subcutaneous layer. Vitiligo is a progressive, idiopathic, pigmentation disorder of the skin, characterized by hypo pigmented patches. This condition is compared with *Shwitra* in Ayurveda. It is essential to study *Twak Rachana* to understand any skin disease. The formation of *Twak* starts in *Grabhavastha*. *Vata* and *Bhrajaka Pitta* take *sthan* in the skin. An imbalance in *Vata* and *Bhrajaka Pitta* cause skin disease.

Keywords: *Shwitra*, Vitiligo, *Twak Sharira*, Skin.

INTRODUCTION

Vitiligo is known in Ayurveda as “*Shwitra*”. The description of *Shwitra* is available since Vedic literature. The terms used in the place of *Shwitra* in Vedic literature are *Shweta Kushtha*, *Kilasa* and *Palita*. The term's *Palita* and *Shweta Kushtha* are also supports the changing of the normal colour of skin into white.

Vitiligo is a common chronic and progressive skin disorder characterized by the lack of melanin pigments producing skin patches (white patches) with sharp and often hyper pigmented edges, which have lost their ability to produce the normal color of the skin.¹ Vitiligo affects approximately 1% of the worldwide population. Highest incidence has been recorded in India and Mexico. Based on dermatologic out patient record, it is estimated between 3-4% in India, although an incidence as high as 8.8% has also been reported, irrespective of the races especially to dark skinned people.²

It is not known what causes Vitiligo to date, even though the multi-factorial character of its clinical expression is quite clear. In this back ground it is essential to study about *Twak* (Skin).

Twak Sharira:

Formation of *Twak*:

The formation of *Twak* starts in *Grabhavastha*, like formation of scum starts after boiling milk. Later in the stages of *Dhatu Parinama*, *Twak* forms as an *Upadhatu* of *Mamsa Dhatu*. All the *Mridu Bhavas* of *Garbha* were considered as maternal elements. So *Twak* is considered as a maternal element.³ *Acharya Vagbhatta* tells formation of *Twak* is in the sixth month of gestation.⁴

Composition of skin:

According to *Charak*, *Twak* is composed of 6 layers. *Charak* does not mention the thickness of layers. He has named only two layers but the rest four layers are described in terms of the diseases.

Table 1: Layers of Skin, According to *Acharya Charak*

Layers	Name of the Layers
1. Prathama	1. Udakadhara-Bahya Twak
2. Dvitiya	2. Asrugdhara
3. Tritiya	3. Sidhma, Kilasa Sambhavadhishthana
4. Chaturthi	4. Dadru, Kushtha Sambhavadhishthana
5. Panchami	5. Alaji, Vidradhi Sambhavadhishthana
6. Shashthi	6. Injury leads- Kampa & Tamodarshana

Acharya Sushrut has described 7 layers of skin along with the specific names. He has also mentioned the thickness of each layer along with the diseases which reside in the respective layers.

Table 2: Layers of the skin according to *Acharya Sushrut*⁶

Name	Thickness	Disease
1. Avabhasini	1/18 th of <i>Vrihi</i> (0.05 mm approx.)	<i>Sidhma, Padmakantaka</i>
2. Lohita	1/16 th of <i>Vrihi</i> (0.06 mm approx.)	<i>Nyachchha</i>
3. Shweta	1/12 th of <i>Vrihi</i> (0.08 mm approx.)	<i>Charmamandala, Mashaka, Ajagallika</i>
4. Tamra	1/8 th of <i>Vrihi</i> (0.12 mm approx.)	<i>Kilasa, Kushtha</i>
5. Vedini	1/5 th of <i>Vrihi</i> (0.2 mm approx.)	<i>Kushtha, Visarpa</i>
6. Rohini	1 <i>Vrihi</i> (1 mm approx.)	<i>Granthi, Arbuda, Apachi, Galaganda</i>
7. Mamsadhara	2 <i>Vrihi</i> (2 to 2.1 mm)	<i>Bhagandara, Vidradhi</i>

- *Acharya Vagbhatta* has described 7 layers of skin similar to *Acharya Sushrut*. He advocated the origin of all types of *Kushtha* in 4th layer of *Twak*, which is named as *Tamra*. Commentator *Arunadatta* and *Hemadri* have named them according to *Acharya Sushrut*.
- *Acharya Sharangadhara* has also mentioned seven layers of skin along with the probable onset of diseases. The names of first six layers are same as *Acharya Sushruta* but a seventh layer is named as

“*Sthula*” which is the site of *Vidradhi*. He has mentioned the location of all types of *Kushtha* to 5th layer of skin i.e. *Vedini*.⁷

- *Acharya Kashyapa* has mentioned 6 layers of *Twak*.⁸

Acharya Ghanekara, one of the commentators of *Sushrut Sharira Sthana* has correlated the layers of skin mentioned by *Acharya Sushrut* with the latest anatomy of skin.

Table 3: Showing the correlation between Ayurvedic and Modern Skin

Ayurveda Term	Modern Term	Types of skin
<i>Avabhasini</i>	Stratum Corneum	Epidermis
<i>Lohita</i>	Stratum Lucidium	
<i>Shweta</i>	Stratum Granulosm	
<i>Tamra</i>	Malpighian Layer	
<i>Vedini</i>	Papillary Layer	Dermis
<i>Rohini</i>	Reticular Layer	
<i>Mamsadhara</i>	Subcutaneous tissue and muscular layers	

The above *Acharyas* have described the diseases that manifest in each layer. But they have got difference in opinion of layer, in which the "Shwitra" occurs. *Charak* considered it as third, while *Sushrut* in the fourth layer.

Nidana of Shwitra:

According to Acharya Charak:

Untruthfulness of speech, ingratitude, blaspheme against god, *Vipra-guru-gharshana* (disrespecting the elders), *Pap Karma* (Sinful actions), acts of past lives and *Virudha Ahara* (incompatible food) are explained as etiology of *Shwitra*.⁹

According to Acharya Sushrut:

Mithyahara - especially *Guru*, *Virudha*, *Asatmya* and *Ajeernahara*, *Adhyashana*, *Ahitahara*, *Ahitachar*

like *Vyavaya* immediately after intake of large quantity of *Sneha* or after *Vamana karma*, intake of milk along *Gramya –Anupaoudaka Mamsa*, immerse in cold water when body is too hot, suppression of *Vegas*, especially the *Vamana*, sinful actions and acts of past lives also mentioned in *Sushrut Samhita* as *Nidana*.¹⁰

Purvarupa:

Purvarupa is the *lakshana* or group of *lakshanas* that indicates the disease to be manifest. *Purvarupa* of *Shwitra* is not mentioned Ayurvedic texts.

Rupa (Lakshana):

In *Shwitra* the general symptom is the appearance of *Shweta Varna mandalas* that is de-pigment patches. The *lakshanas* mentioned in various texts, according to *Dosha* involved.

Table 4: Dosha & lakshana of Shwitra according to different Samhitas

Samhita	Dosha	Lakshana
Sushrut	Vata	Mandala, Aruna, Parusa, Paridwamsi
	Pitta	Padmapatra Varna, Daha
	Kapha	Shweta, Snigdha, Bahala, Kandu
Ashtanga Samgraha	Vata	Ruksha, Aruna
Ashtanga Hridaya, Bhava Prakash	Pitta	Tamravarna, Daha, Romadwamsi
Madhav Nidana	Kapha	Shweta, Ghana, Guru, Kandu

Classification of Shwitra:

Vitiligo is an organ specific autoimmune disease of the skin characterized by the development of well-

circumscribed white macules associated with local melanocyte loss.¹¹

All the authors of *Brihatrayi* and *Laghutrayi* mentioned three types of *Shwitra*.

Table 5: Shwitra Bhedas according to various Acharyas

Sr no	Samhita	Bheda	Names		
1	Charak	3	Daruna	Aruna	Shwitra
2.	Sushrut, Ashtanga Hridaya, Bhava Prakash, Sharangadhara	3	Vataja	Pittaja	Kaphaja
3	Kashyapa	5			
4.	Madhava	2	Doshaj	Vranaja	
5.	Harita	2	Sadhya	Asadhya	

Samprapti:

Dosha: *Tridoshas* - said to be involved in *Shwitra*.

Srotas: Direct reference regarding the *Srotas* involved in *Shwitra* is not mentioned in any Texts,

Most of the *Acharyas* accepted the etiological factors for *Kushtha* and *Shwitra* are same as – '*Kushtaikasambhavam Shwitram*'

Spreading of the *Dosha* starts initially through *Rasavahi Srotas*.

Dushya: *Rakta, Mamsa* and *Meda*.

DISCUSSION

The layers of *Twak* forms in the stages of *Grabhavastha*, as scum layer formation on boiling milk. According to *Sushrut Twak* is composed of seven layers whereas *Charak* said 6 layers. The specific "*Bhrajaka Pitta*" is located in *Twak* and responsible for production of normal and abnormal color of the skin, as whole, and parts and structures of the body viz. hands, feet, sides, back etc.

There are many causative factors for *Shwitra* like *Aharaja, Viharaj, Viprakrista (Purva-janmakrita papa* etc.,) are described in *Ayurveda*.

Dosha Dushya Sammurchchhana is another interesting point for discussion. Due to etiological factors the *Tridoshas* get vitiated and occupies the three *Dhatu*s namely *Rakta, Mamsa* and *Meda* as a result *Shwitra* occur. The above involvement of *tridoshas* is termed as "*Tridhatudbhava samshrayam*". This *tridhatudbhava samshrayam* leads to a bit of confusion for the lesion of *Shwitra* is manifesting in *Twak*. All authorities of *Ayurveda* accept the limitation of *Shwitra* up to the skin. It is in the 3rd of the 6th layers according to *Charak* and in the 4th of 7th layers of *Sushrut*. According to *Ayurveda*, vitiation of *Bhrajaka Pitta* brings changes in the normal colour of the skin, in vitiligo, which is something like defective melanin formation.

CONCLUSION

The Skin is considered as a protective covering for more delicate & functionally sophisticated internal viscera. Vitiligo is a progressive, idiopathic, pigmentation disorder of the skin, characterized by hypopigmented patches. This condition is compared with *Shwitra* in *Ayurveda*. According to *Ayurveda*, vitiation of *Bhrajaka Pitta* brings changes in the normal colour of the skin. It is caused due to vitiation of *Tridosha* and *Dhatu*s like *Rasa* (lymph), *Rakta* (blood), *Mamsa* (muscles) and *Meda* (fats).

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