

Kriyatmak Adhyayan of Twacha: 'Ksheerasya Eva Santanika'.Chandrasekhar Y. Bangarwar*¹, Sanita A. Eppalpalli²

1. Prof. & Head Dept. of Kriyasharir,
Glocal College of Ayurvedic Medical Science & Research Centre,
Behat Dist. Saharanpur (Uttar Pradesh),
2. Assist. Professor, Dept. of KriyaSharir,
Shree Narsingh K. Dube Charitable Trust,
Nallasopara Ayurved Medical College, Dist. Thane, Maharashtra, India

* Corresponding author: bangarwar.aakash@gmail.com;

INTRODUCTION

According to Ayurved, *Twacha* is the *Updhatu* of *Mamsa Dhatu*. Skin is believed to be formed by the metabolism of *Rakhta Dhatu*; a phenomenon similar to the formation of cream over milk, when it is made to cool after heating: '*Ksheerasya Eva Santanika*'. Skin (*Twacha*) is the largest organ of the body and has a great cosmetic value. This article describes *Twacha* in all respects of *KriyaSharir*, i.e., *Twacha*-as an *Indriya* and its role in sensation of touch, understanding the concept of '*Dynan Graham Prakriya*'. *Twacha* related *Dosha* and their functions, *Vruddha* and *KsheenaDosha* effects on *Twacha*, *Twacha* as *Updhatu* of *Mamsa*, *Twacha* -as one of the *MoolaSthana* of *MamsavahaStrotas*, *SaptaTwacha* and its modern co-relation with skin and *Twak Saar PurushLaxanas*. At the end, it was also important to mention *Twak pariksha*

as a tool in *AshtaVidha Rogi Pariksha* boon of Ayurved to mankind.

Keywords: *Mamsa, Twacha, Dhatu, Indriya*

MATERIALS AND METHODS

Textual references are used for the study from classics of *Ayurved* like *Charak Samhita*, *Sushruta Samhita* and *Ashtang Hridaya*.

REVIEW OF LITERATURE**➤ *TwachaUtpatti* – formation**

Charak has described skin as a structure covering the entire body.

SarvaShariramAachakshanat.....!

SharireShataTwacha....! Ch. Sh.

7/4.p.919

Sushtura described that after fertilization of ovum *Twacha* develops just like a cream on the surface of milk during the course of development of *Garbha*. Differentiation of the layers of the skin takes place and is produced by all three *Doshas*, particularly by the *Pitta*.

ShukraShonitasyaabhiPachyamaanasyaKshirasya *Eva*
SantanikahSaptaTwachobhavanti! *Su.*
Sh. 4/4.p.125

Vagbhata described *Twacha* as formed due to the *Paka* of *RaktaDhatu* by its *Dhatvagni* in the foetus. After *Paka*, it dries up to form *Twacha*, just like the deposition of cream over the surface of boiled milk.

TatraSaptaTwachAsrujahPachyamaana
tPrajaayanteKshiraatSantanika *Iva!*
A. Hr. Sh. 3/8.p.133

According to all *Acharyas* *Twacha* is formed as the *Updhatu* of *MamsaDhatu*.

➤ *Sparshanendriya* and physiology of perception of touch and pain as per *Ayurved*

Ayurved explains sensory perceptions with the help of a tool named '*IndriyaPanchapanchak*'. This tool includes, sensory receptor (*Indriya*), principle element (*IndriyaDravya*), anatomical area (*Indriya Adhishtan*), subject of perception (*Indriyarth*), and control centre (*IndriyaBuddhi*). So for the sensory perception of touch and pain, we can have the *IndriyaPanchapanchak* as follows,

<i>Indriya Panchapanchak</i> ^I		Modern Co-relation	
<i>Indriya</i>	<i>Sparshan</i>	Sensory receptors	Touch and Pain receptors
<i>IndriyaDravya</i>	<i>Vayu</i>	Principle element	Nerve conduction
<i>IndriyaAdhishtan</i>	<i>Twak</i>	Anatomical area	Skin
<i>Indriyarth</i>	<i>Sparsha</i>	Subject of Perception	Touch and Pain message
<i>IndriyaBuddhi</i>	<i>SparshanBuddhi</i>	Control centre	Brain stem and Thalamus

Charak had explained the physiology of perception of senses as;

Aatmendriya *Mano*
ArthanaamSannikarshaatPravartate!
VyaktaTadatweYaBuddhiPratkshyamSaN
iruchyate!!

Ch. Su.11/20 p.231

The mutual connectivity of *Aatma*, *Indriya*, *Mana* and *Indriyarthagenerates* knowledge (*Buddhi*) which is of direct comprehension known as *Pratkshya*.

In TarkaSangraha the exact pathway of the physiology is explained as;

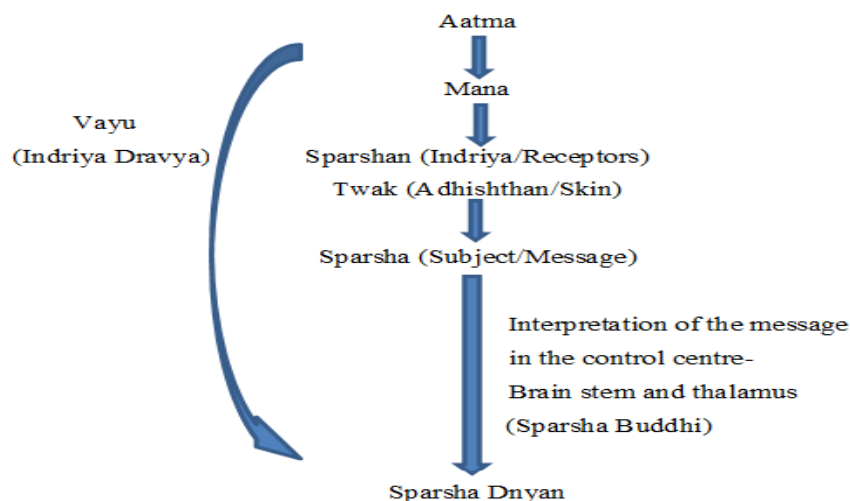
‘AatmaManasaSanyujyateManasaIndriye
naIndriyamArthenaTatahPratyaksham’!

T.S

According to *Tarka Sangraha*, direct comprehensive knowledge is obtained only when *Aatma*etc mutually connect with each other in a specific order which is, *Aatma- Mana- Indriya- Indriyarth*.

So by following the above points of *Acharyas*, the physiological pathway of touch and pain sensation can be traced as follows,

DynanGrahanPrakriya



Vyapakatva of *Sprashanendriya* by TarkaSamgraha,

‘SparshanVyapteVyapakamapi *Cha*
Cheta’! *T.S*

As per Ayurved, out of all *Dyanendriyas*, *Sparshanendriya*is described as to be

‘Vyapaka’ i.e, widespread. It is so because *Sparshanendriya*is present over all the body and *Mana* is similarly present in every part or inch of the body. *Mana*and*Sparshanendriya*are having inseparable relation known as *SamvayaSambandha*. Hence both are

extensively spread around the whole body.

➤ Twacha related Dosha and their Physiological functions

KriyaSharir is the part of *Ayurved* dealing with the concepts of *DoshaDhatu* and *Mala*. So, study of any topic in *Ayurved* begins with the relation of *DoshaDhatu* and *Mala*.

In physiology of *Twacha*, we have the following relations

1. *Dosha* and *Twacha*

<i>Dosha</i>	Functional Relation
<i>Vata</i> (<i>Udana</i>)	<i>Varna</i> ² (Maintains skin complexion)
<i>Pitta</i> (<i>Bhrajak</i>)	<i>Prabha</i> ³ (Glow of Skin) and <i>Bhrajishnuta</i> ⁴ (Brightness of skin)
<i>Kapha</i>	<i>Snigdha</i> ⁵ (Smooth and soft texture of Skin)

UdanaVayu and *Bhrajak Pitta* are responsible in maintaining the *Varna* and *Prabha* of the skin i.e, *Chaaya*. Thus all the skin diseases with change in *Varna* and *Prabha*, of the skin gives a

pathological image of the skin in the form of *VikrutChaaya*.

*Chaaya*⁶ (Reflection of Skin)

Ayurveda gives prime importance to the lustre of skin in case of deciding the diagnosis and the prognosis of any disorder. *Chaaya* is found assimilated into the *Varna* (colour) and *Prabha* of the skin. As per *Charak* synonyms of *Chaaya* are *Sansthana* and *Akruti*. (Which are also the synonyms of *Lakshana* or signs of diseases). *Chaaya* is believed to be the reflection of the skin. The same *Chaaya* when reflected via mirror or light is known as *Pratichaaya*.

Chaaya is of 5 types as per *Panchamahabhutas* (Principle elements)

- *Nabhiya*- Blue coloured mild and *Sneha* + *Prabha*
- *Vayu*- Black/*Aruna* mixed colour, dry, destroyed colour (Worst type)
- *Agneya*- Red and *Shuddha*, pure as well as presentable *Prabha*.
- *Jaliya*- *Shuddha* as Cat's eye gemstone, *Snigdha*
- *Parthiva*- *Sthira*, *Snigdha*, *Ghana*, *Shlakshana*, *Krushna*/ *Shvetavarna*.

*Prabha*⁷

Prabha is *TejoMahabhuta* predominant and it exemplifies the *Varna* of *Twacha* and thus gives the 7 different *Prabha* as;

- *Hareet* (Green),
- *Peeta* (Yellow),
- *Shweta* (White),
- *Krushna* (Black),
- *Pandura* (Whitish),
- *Shyaava* (Greyish Black)

Difference⁸ between *Chaaya* and *Prabha*

- *Chaaya* reflects over *Varna* and *Prabha* exemplifies the *Varna* of the skin.
- *Chaaya* can be observed from near distance and *Prabha* is highlighted even from far away.
- *Chaaya* depends on *Varna* and *Prabha* whereas, *Prabha* is independent of all.

Bhrajak Pitta digests the medicine applied over the skin i.e., *Abhyanga*, *Parisheka*, *Avgahana* and *Lepana*. It enlightens the skin with brightness, which is its main function.

Snigdha- The normal physiological role of *Kapha Dosha* is explained to as providing oiliness (*Snigdha*) to the skin. This function can be assumed as maintaining the texture of skin as smooth and soft.

Charak has mentioned that, persons of *Kapha* *Pradhana Prakriti* are attractive⁹, which indicates that *Kapha* is mainly

responsible for lustre and texture of the skin.

2. *Dhatu* and *Twacha*

<i>Dhatu</i>	Relation
<i>Rasa</i>	<i>Twaka Sarata</i> is described for <i>Rasa Dhatu</i>
<i>Mamsa</i>	<i>Twak</i> is <i>Upadhatu</i> of <i>Mamsa</i>
<i>Majja</i>	<i>Twak Sneha</i> as <i>Mala</i> of <i>Majja Dhatu</i> by Charak and Vagbhat

Twaka is a seat of *Rasa Dhatu*. So it must be an important role of *Rasa Dhatu* in the formation of colour and complexion of the skin. It is best explained by the qualities of the *Twaka Sarapuruṣa*.

Twacha is described as formed as *Updhatu* of *Mamsa*.

3. *Mala* and *Twacha*

<i>Mala</i>	Relation
<i>Sthula Mala</i>	----
<i>Dhatu mala</i>	<i>Twak Sneha</i> as <i>Mala</i> of <i>Majja Dhatu</i> by Charak and Vagbhat

Only a clean body can properly utilize the nutrients it receives, likewise, only an open mind free to enjoy the world.

International Journal of Research in Indian Medicine

Sweda is one of the *Trimalas* which maintains lustre & turgidity of the skin. *Sneha* of *twacha* (moisture and lustre) is mala of *Majjadhatu* as described by

Charakin *Grahanidoshachikitsa adhyaya*¹⁰.

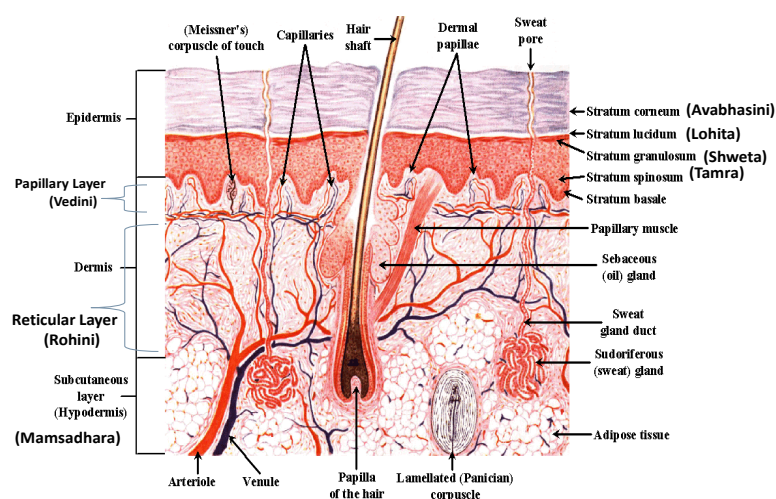
4. *VruddhiKshaya* effects of *Dosha* and *Dhatu* on *Twacha*²

Dosha	Vruddhi Effect	Kshaya Effect
Vata	Karshnya, Ushna Kamana	Kapha Vruddhi Saman
Pitta	Peetavarnata, Daha	Sheetata, Prabhahani
Kapha	Shvaiyta, Shaitya	---
Dhatu		
Rasa	----	Roukshyam
Rakta	Visarpa, Vidradhi, Kushta, Raktapitta, Kamala, Vyanga, Raktatwacha	Rukshata

➤ *SaptaTwacha* and its modern correlation with Skin

Layers of skin are narrated by various *Acharyas* but *Sushruta* has mentioned

more correctly. Dr. Ghanekar has correlated the layers of skin mentioned by *Sushruta* with the latest anatomy of skin as follows and diseases according to layers of Skin.



Correlation of *SaptaTwacha* and respective diseases with modern skin layers

<i>Sapta Twacha</i> ¹¹	Modern Co-relation	Diseases
<i>Avabhasini</i>	Stratum Corneum	<i>Sidhma, Padmakantaka</i>
<i>Lohita</i>	Stratum Lucidum	<i>Tilakalaka, Nyachchha, Vyanga</i>
<i>Shweta</i>	Stratum Granulosum	<i>Charmadala, MashakaAjagallika</i>
<i>Tamra</i>	Malpighian Layer	<i>Kilasa, Kushtha</i>
<i>Vedini</i>	Papillary Layer	<i>Kushtha, Visarpa</i>
<i>Rohini</i>	Reticular Layer	<i>Granthi, Arbuda, Apachi</i>
<i>Mamsadhara</i>	Subcutaneous tissue and Muscular layer	<i>Bhagandara, Vidradhi, Arsha</i>

➤ *Twak*

MamsavahaStrotasMoolaSthana

'Mamsavahanaam Cha StrotasaamSnayurmoolamTwak Cha!'
Ch. Vi. 5/7. p.696

Twacha is said to be one of the *MoolSthan* of *MamsavahaStrotas*. As *Upadhatu* it nourishes the *MamsaDhatu* via these channels.

➤ *Twak Saar PurushLaxanani*

'TatraSnigdhaSlakshnaMruduPrasannaSookshmaalpaGambhiraSukumaar Loma Saprrabheva Cha TwakSaaranam!'
Sa SaarataSukhaSoubhagyaAishvaryaUpabhogaBuddhiVidhyaAarogyaPrahars hanaanyamAayushyatvam Cha Aachaste!!'

Ch. Vi. 8/103.p.763

Skin of the *Tvakasarapurushais Snigdha, Shlakshana, Komal, Prasanna, Sukshamaand Prabhayukta*. It exhibits the *Prabha* of the skin. These individuals are said to be lucky, wealthy, and luxurious. They are described as intelligent, knowledgeable, healthy, jovial with good longevity of life.

➤ *Agni*

Ayurveda has unique concept of *Agni*. It has the power to digest food well, making all nutrients available to the tissues. It also cleans toxins and excess waste from the systems. It is responsible to create all disease if power of digestion becomes low¹¹. Keeping the digestive tract cleans and the outer body fresh and glowing. Hence healthy and balanced *Agni* is necessary to keep the body and mind balanced and healthy.

➤ **Mana and its effect on Twacha**

Acharya Charak has explained *Strotas* in detail in *Vimanasthan*. Here he gave the reason for *Rasavaha Strotas Dushti* as '*Achintyanaam Cha Ati Chintanaat*'¹². This means excess amount of thinking over unnecessary things is the main reason for vitiation of *Rasavaha Strotas Dushti*. '*Chintan karma*' or 'thinking' is the function of Mind. But when Mind is subjected to over thinking on unwanted subjects it can become the leading cause of *Rasavaha Strotas Dushti*.

➤ **Twak – Ashta Vidha Rogi Pariksha**¹³

'Rogakrantasya Dehasya Sthaananyashtou Pariksheta! Naadim Mootram Malam Jivham Shabdham Sparsham Drugaakruti!!'

Yogratnakar

Ayurved has described various tools for examination of the diseased as well as healthy individual. One of these is the *Ashta Vidha Rogi Pariksha* mechanism.

This mechanism involves 8 tools of examining the whole body of the diseased. These tools are nothing but area of the body which depicts the health of an individual.

Twacha is one amongst the tools. Thus by examining the *Twacha* we can have a fair

idea of the disease. As explained earlier, *Twacha* can be examined by observing the *Chaaya* and *Prabha* of the Skin.

CONCLUSION

1. *Twacha* is the *Indriya Adhishthan* of *Sparsha Gyaan*.
2. It has inseparable relation with *Mana* and hence said to be *Vyapaka*.
3. It exhibits the image of the physiological and pathological imbalances of the body's internal environment.
4. *Indriya Panchapanchak* and factors causing *Pratyaksha Dynan* can be used as a tool to understand the physiology of *Dynan Grahan Prakriya* of any sense organ.
5. *Rasavaha Strotas* is mainly vitiated because of abnormal functioning of *Mana* and so *Mana* has direct effect on *Twacha*. This makes *Mana* a leading cause in *Twacha Vikara*.

REFERENCES

1. Dr. Brahmanand Tripathi and Dr. Ganga Sahay Pandey, editors. *Charak Samhita* of Agnivesha,

- Sutrasthan. Delhi: Chaukhamba Sanskrit Pratisthan; 2006. p.189
2. Dr.Ganesh Garde, editor. Sarth Vagbhata, Sutrasthan. Varanasi: Chowkhambha Surbharati Publication; 2009. p.55
3. Dr.Ganesh Garde, editor. Sarth Vagbhata, Sutrasthan. Varanasi: Chowkhambha Surbharati Publication; 2009. p.51
4. Dr.Ganesh Garde, editor. Sarth Vagbhata, Sutrasthan. Varanasi: Chowkhambha Surbharati Publication; 2009. p.55
5. Dr. Ghanekar, commentator. Sushruta Samhita, Sharirasthan. New Delhi: Maeherchand Lachmandas Publication; 2013. p.123
6. Dr.Brahmanand Tripathi and Dr. Ganga Sahay Pandey, editors. Charak Samhita of Agnivesha, Indriyasthan, Delhi: Chaukhamba Sanskrit Pratisthan; 2006. p.1020
7. Dr.BrahmanandTripathi and Dr. Ganga SahayPandey, editors. CharakSamhita of Agnivesha, Indriyasthan. Delhi: Chaukhamba Sanskrit Pratisthan; 2006. p.1021
8. Dr.BrahmanandTripathi and Dr. Ganga SahayPandey, editors. CharakSamhita of Agnivesha, Indriyasthan. Delhi: Chaukhamba Sanskrit Pratisthan; 2006. p.1022
9. Dr.BrahmanandTripathi and Dr. Ganga SahayPandey, editors. CharakSamhita of Agnivesha, Vimanasthan. Delhi: Chaukhamba Sanskrit Pratisthan; 2006. p.759
10. Shukla Vidyadhar, Tripathi Ravi Dutt, editors. Charak Samhita of Agnivesha, Chikitsasthan. Delhi: Chaukhamba Sanskrit Pratisthan; 2002. p.364
11. Dr.Ghanekar, commentator. SushrutaSamhita, Sharirasthan. New Delhi: MaeherchandLachmandas Publication; 2013. p.140
12. Dr. Brahmanand Tripathi and Dr. Ganga SahayPandey, editors. Charak Samhita of Agnivesha, Vimanasthan. Delhi: Chaukhamba Sanskrit Pratisthan; 2006. p.360

Cite this article:

Kriyatmak Adhyayan of Twacha: 'Ksheerasya Eva Santanika'.

Chandrasekhar Y. Bangarwar , Sanita A. Eppalpalli

AYURLINE: INTERNATIONAL JOURNAL OF RESEARCH IN INDIAN MEDICINE 2017; 1(1) : 19-27

Source of Support: None, Conflict of Interest: None

Received: March, 2017. Accepted: March, 2017