

TWAKSARTA (HEALTHY SKIN) AND ITS RELATIONSHIP WITH AGNI: A REVIEW

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ABSTRACT

It is a universal truth that healthy and lustrous skin increases the aesthetic value of person. It is a source of pleasure not only to its owner but also to one who looks at it. *Twacha* reflects one's emotions and some aspects of normal physiology. A slight change in its colour might be an indication towards the homeostatic imbalances in the body. Along with *Dosha*, *Dhatu*, *Mala*, *Agni* also plays a vital role in maintaining *Twak Swasthya*^[1]. *Agni* (fire) is the invariable agent in the process of *Paka* (chemical action) ingested food is to be digested, absorbed and assimilated, which is unavoidable for the maintenance of life and is performed by *Agni*. The different types of *Agni* perform different functions according to its site. Wholesome foodstuffs ingested in the fourfold manner having been digested by *Jatharagni* is followed by further *Paka* by *Bhautikagni* which are again subjected further *Paka* by *Dhatwagnis*. *Dhatwagnis* catalyze further metabolic transformation of the nutrient substances before they made available to the seven *Dhatues*. *Dhatwagnis* leads to formation of *Kitta* (metabolic waste) part and *Prasada* (nutrients) part which nourishes *Dhatu* results in *Dhatu* and *Dhatumalasamyā*. This concept is helpful in the formation of *Twaksarata*. So, in present article it is an attempt to study concept of *Twaksarata* and its relationship with *Agni*.

Keywords: *Agni*, *Jatharagni*, *Panchbhutagni*, *Rasdhatwagni*, *Twacha*, *Twaksarta*.

INTRODUCTION

Twacha is a vital organ of human body. It is one of the *Gyanindriyas* which is responsible for *Sparsha Gyan*. The word *Twacha* is derived from *Twak Savarne Dhatu* which means the covering of body. The entire *Shadangas* remain covered by the *Twacha*^[2]. It is formed and nourished by *Matruja Bhava*^[3]. The skin is the largest organ of our body. The unbroken skin is the nature's dressing over the body. A healthy skin is a source of pleasure not to its owner but also to one who

looks at it. It is believed in ayurveda that one can enhance internal beauty by understanding and following basic principles of ayurveda. Ayurveda determines beauty in terms of *Prakriti*, *Anguli Praman* and *Sara*, etc. *Sarais* the term given to the supreme quality of *Dhatu*. *Dhatusarata* is the novel concept described exclusively by Ayurveda. During the description of *Dhatusarata* types the term *Rasasarata* is not used in any of the *Samhita*. It is

described as *Twaksarata* and can be assessed by *Twakpariksha*. An abnormal change over *Twak* assessed by *Twakpariksha* is caused by factors like pollution, mental stress and an impaired metabolism. *Ayurveda* has described an important factor of digestion and metabolism in our body as *Agni*. In present review here is an attempt to explore the concept of *Twacha* its theory of *Utpatti*, *Prakara*, *Karya* and its relation with *Agni*.

Aim and Objectives

- 1) To study concept of *Twacha* through *Samhita Granthas*.
- 2) To study concept of skin according to modern.
- 3) To study relation of *Twaksarata* with *Agni*

Materials and Methods

1. For the current research to topic will be taken as source of material from *Brishatrayi and laghutrayi*.
2. Relevant modern literature will also be referred for the purpose of better understanding.
3. Review of all available previous dissertation research papers and research journals.
4. Opinion from the expert physicians and subject experts will also be collected.

Literature Review

Acharya Sushruta the father of surgery has very well elaborated the theory of *Twacha Utpatti* under the heading of *Sharir Garbha Vyakdrana*. When the fertilization takes place, the fetus develops rapidly through the process of transportation. *Twacha* is developed like the milk membrane develop at the surface of boiled milk, in chronological order for making of layers. [4] This suggests that *Twacha* develops initially in the *Garbh* and inside it all organs develop. According to *Sushrut* after fertilization of ovum, *Twacha* develops just like cream on the surface of milk.

In the uterus during development of *Garbha*, differentiation of the skin takes place and is produced by all three *Doshas*, particularly by the *Pitta Dosh*. *Twacha* develops consecutively seven layers by the

synchronized peculiar action of *Dosha*. According to charak the six layers of *Twacha* is formed form *Mamsa Dhatu*. Nutrients coming from *Poshak Mamsa Dhatu* are acted upon by *Mamsa Dhatwagni* and *Poshya Mamsa* is formed along with *Updhatu Vasa* and six layers of *Twacha*. [5]

Aacharya Vaqbhata described the formation of *Twacha* due to pak of *Rakta Dhatu* by its *Dhatvagni* in the fetus. After *Paka* it dries up to form *Twacha*, just like the deposition of cream over the surface of boiled milk. [6] *Vruddha Vagbhata* says that *Rakta Dhatu* plays main role in the manifestation of *Twacha* [7]. While commenting on this, *Indu* says that metamorphosis of *Rakta* by its own *Ushma* results in accomplishment of all layers of *Twacha*. According to *Bhavmisha*, *Twacha* is formed by *Pachan* of *Shukra* and *Ras Dhatu*. [8]

According to modern science, skin is a combined form of ectoderm and mesoderm

Twacha Utpatti Kala is different according to *different Samhitas*. According to *Yagyavalka Smruti*, *Twacha* is formed in fourth month of foetal life. According to *Vagbhata*, it is formed in the 6th month of foetal life [9]. Charak says that *Mamsa Dhatu Vruddhi* occurs in the fifth month and *Varna Utpatti* at 6th month, so formation of *Twacha* will be completed upto 6th month of foetal life [10]. As per modern medical science, all layers of epidermis is formed in the 4th month of intrauterine life.

Twacha is mentioned as *Upa Dhatu* of *Mamsa Dhatu* by all *Aacharyas* except *Sharangdhara* [11], so nourishment of *Twacha* is achieved through essence of *Mamsa Dhatu* *Twacha* is mentioned as *Mala* of *Majja Dhatu* [12].

According to *Charaka*, third layer of skin can be considered as the site of *Varana*. But, it is manifested through the *Avabhasini* layer. *Chaya* circumscribes the *Varna* and can be observed only from nearby [13]. First layer *Udakdhara* is concerned with regulation of water balance. Second layer *Asrugdhara* is rich source of blood.

Table 1: Name of Various Skin Layers According to Different Acharyas

<i>Charak and Bhel</i>	<i>Sushrut, Vagbhat, Arundatta, Hemadri</i>	<i>Vrudha Vagbhat</i>	<i>Sharangdhar, Bhav Prakash</i>	<i>Mordern Science</i>
<i>Udakdhara</i>	<i>Avbhasini</i>	<i>Prathama</i>	<i>Avbhasini</i>	<i>Stratum Cornium</i>
<i>Asrugdhara</i>	<i>Lohita</i>	<i>Dwitiya</i>	<i>Lohita</i>	<i>Stratum Lucidum</i>
<i>Trutiya</i>	<i>Sweta</i>	<i>Trutiya</i>	<i>Shweta</i>	<i>Stratum Qranulosum</i>
<i>Chturthi</i>	<i>Tamra</i>	<i>Chaturthi</i>	<i>Tamra</i>	<i>Stratum Qermineum</i>
<i>Panchami</i>	<i>Vedini</i>	<i>Panchami</i>	<i>Vedhini</i>	<i>Papillary Layer</i>
<i>Shashti</i>	<i>Rohini</i>	<i>Prandhara</i>	<i>Rohini</i>	<i>Reticular Layer</i>
	<i>Mamsandhra</i>		<i>Stula</i>	<i>Hypodermis</i>

TwachaKarya Aavaran^[14] The basic function of skin is the physical protection. Skin makes the barrier against bacteria. Keratin a protein synthesized by keratinocytes functions for developing resistance against infections.

Protection from UV rays is important function of skin. Melanin a protein synthesized by melanocytes functions to absorb the UV rays.

Sparshagyan^[15]-Skin is one type of sensory organ it functions as a touch sensory to identify the physical changes in the external environment like pressure, temperature. Here relation with *Vata Dosha* is established.

Ushma Niyatrana- Thermo-regulation is an important function of skin. Through the mechanism of perspiration, it also regulates the temperature of the body

Mala Nirharan- Skin plays important role in maintaining homeostasis through the excretion of *sweda* through *Swedwahastrotas* which opens on *Twacha*.it also functions for keeping acid and base balance through the excretion of urea, CO₂ and other acidogenic factors.

Lepan^[16]- It is most important function of *Mamsa Dhatu*. *Twacha* is *Updhatu* of *Mamsa Dhatu* and it is one of the roots of *Mamsvahasrotas*^[17]. As per *Aacharya Charaka* is suggestive to this fact. Further to this point, since skin synthesis the vitamin D, which is almost an anabolic growth and is also known as anti-ageing and vitamin. Beneficial role of vitamin D in the treatment of diseases like autoimmune illness, cancer, chronic pain diabetes, heart diseases, hyperparathyroidism, hypertension, mental illness, obesity, muscle weakness and coordination, osteoarthritis,

multiple sclerosis is a valuable material in this regard. It functions in the metabolism of calcium and phosphorous, vitamin D function for the assimilation and deposition of calcium, physiology of action in the muscle is totally calcium dependent.^[18] Thus *Aacharya Charak* has rightly said on the theory of *Mamsavaha Strotas*.

Prakashan^[19]- According to *Acharya Shushruta*, skin is the seat of *Bhrajak Pitta* and this is responsible for *Varna*. According to *Acharya Sushruta*.

Pachan- Because of *Bhrajaka Pitta*, skin functions to catalyze the metabolic process related with the therapies of *Abhyanga, Parisheka, Avagah, Alepan, Udvartan etc.* As healthy skin is the gateway of person and personality, so, to make skin healthy externally our *Sages* used to apply *Lepa* on *Twacha* which get absorbs and get absorbed and performs the function

Acharya Shrangdhara has referred that the healthy skin benefits to the wisdom, knowledge and health. Skin is achieved by *Pachan of Lepa* and *Abhyanga*^[20] According to modern science it refers to every type of anabolic activities in the body, including synthesis of protein lipid glycogen and hemoglobin. These substances reflect in the skin.

Relation of Twaksarta with Agni - the factors which do the functions of *Dharana*^[21] of *Sharira, Mana* and *Prana* are called as *Dhatu*. Entity that sustains, grows and nourishes the body is called as *Dhatu*. *Dhatu*s have same set of functions in every individual but quality and richness of these functions may vary from person to person which is decided by excellent state of these *Dhatu*s which is nothing but the *Dhatu Sarata*. The supreme quality and superb functional aspect of

Dhatu is *Sara*. *Dhatu Sarata* is the novel concept described exclusively by *Ayurveda*. In *Vimanshana*, *Charaka Pani* commented on the term *Sara* as *Vishuddhatara Dhatu*^[22]. *Ras Dhatu* is the first *Dhatu* in the body being nourished by and term *Ahara-Rasa*. *Vagbhata* stated that the principle function of *Rasa Dhatu* is mainly for freshening individual it is called *Preenana Karma*^[23] it helps to sustain the water and moisture content of the body.

During the description of *Dhatu Sarata* types the term *Rasa Sarata* is not used in any of the *Samhita*. It is described as *Twaksara*. *Dalhana* clarified that in the term *Twaksara* the word *Twak* means the *Rasa* underneath the *Twacha*^[24]. Probably it is due to the fact that the functions of the *Rasa Dhatu*. i.e. the *Preenana*, is to be best manifested on *Twak*. It makes the skin healthy and maintains nutritional state of the body. It suggests the supreme qualitative and functional state of *Rasa Dhatu*. It can be assessed by *Twak Pariksha*. Hence, *Rasasara* and *Twaksara* are used as synonyms of each other. Individuals having excellence of *Twak* or skin are characterized by *Snigdha Twacha* (unctuous, oily), *Shlakshna Twacha* (smooth), *Mridu Twacha* (soft), *Prasanna Twacha* (fresh in appearance), *Sukshma*, *Alpa*, *Gambhir*, *Sukumar Loma* (having very fine clear, less numerous, deep rooted and tender body hairs.) and *Suprabha Twak* (having natural glow over it). Such individuals are endowed with *Sukh* (happiness), *Saubhagya* (good fortune), *Aishwarya* (prosperity), *Upbhoga* (enjoyment), *Buddhi* (good intellect) *Vidhya* (knowledge), *Arogya* (health), *Praharsha* (cheerfulness and happiness seen on face) and *Awushatvan* (longevity of life).^[25] *Rasa Sarata* can be easily determined by *Twak Pariksha*. A healthy skin reflects the healthy physiological state of body which in turn depends on excellence state of *Rasa Dhatu*. Any disturbance in *Rasa Sanvahana* (related to *Rasavaha Srotas*, *Vyana Vayu*), its unusual impaired metabolism (related to *Rasdhatwagni*) and most important *Prakrut Rasa Dhatu* formation (related to

Jatharagni, *Panchbhutagni* and *Samana Vayu*) leads to abnormal changes over *Twak*.

DISCUSSION

In the review of previous studies, it was found that for the good lustrous and healthy skin the *Agni* should function properly. *Agni* is the term given in *ayurveda* for the whole process of energy liberation through digestion at the level of GIT and metabolism at the tissue level. Digestion, metabolism and assimilation that is whole process of biological conversion and utilization of energy is symbolized by the term *Agni*. The term *Agni* not only includes *Jatharagni* but also *Bhutagnis* and *Dhatwagnis*. power of *Agni* determines the quantity of food to be consumed. Factors responsible for conversion (i.e. digestion and metabolism) of ingested food into appropriate *Dhatu* are grouped under term *Agni* according to *Arundatta*, there are 13 types of in the body (referred to table no. 2).

Jatharagni looks after the function of food digestion and absorption at the level of GIT (i.e. conversion of consumed food into lymph) which is termed as *Avasthapak*.

Bhautiagnis are 5 in no's (i.e. *Prithwi*, *Aap*, *Tej*, *Vayu* and *Aakash*). It turns all the *Panchbhautic Aahar* consumed to separate entity according to their *Mahabutadhikya* in the liver (i.e. conversion of heterogeneous substances to homogenous substances) which is termed as *Nishtapak*

According to *Vagbhatacharya*, *Jatharagni ansh* located at specific *Dhatu* known as *Dhatwagni* of that *Dhatu*. These *Dhatwagnis* are in their own tissues according to its own *Srotas* either to form new tissue or deliver its function. *Dhatwagnis* acts upon appropriate *Dhatu poshakansh* present in a potential form in an *Ahar Rasa* (food after intestinal digestion) and produce *Prasad* and *Kitta bhaga* at the tissue level i.e. synthesis and breakdown of tissues, which is termed as *Dhatwagnipaka*.

Table 2: Types of Agni

Main Type	Functions	No. and Names of Sub-Type
Jatharagni	Looks after the functions of food digestion and absorption	1.Jatharagni
Bhutagni	Turns all the Vijatiya Panchbautic Dravyas consumed to Sajatiya Panchbautic Dravyas i.e. conversion of heterogeneous to homogenous	5.(Prithwi, Aap, Teja, Vayu, Aakash)
Dhatwagni	Acts for the purpose of synthesis and breakdown of tissue	7. (Rasa, Rakta, Mamsa, Meda, Asthi, Majja, Shukra)

CONCLUSION

Based on the literature review and discussion the following conclusions can be drawn. For the *Prakrut* formation of *Rasa Dhatu*, there should be *Samyak* digestion of *Panchbautik Aahar* by the *Jadharagni* into *Vijatiya Dravyas* at the level of GIT (*Avasthapak*), *Samyak* final digestion of absorbed *Aahar Rasa* by *Panchbhutagni* into *Sajatiya Dravyas* at the liver (*Nishtapak*) and *Samyak* metabolism and assimilation of *Rasa Dhatu* into *Sara* and *Kitta Bhaga* by *Rasadhatwagni* at the tissue level (*Rasdhatwagnipak*) is essential.

Aacharya Charaka, in his *Chikista Adhaya* 15 explained signs and symptoms of proper functioning of *Agni*. In that he mentioned that, if *Agni* is functioning proper in a person, then his skin is having good luster and texture. Thus, *Agnis* play a major role in maintaining *Twaksarta*. So, one can achieve a healthy and lustrous skin by maintaining *Agni* in balanced state.

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