

Rachanatmak Review of Sapta Twacha and It's Modern Correlation with Skin Layers

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ABSTRACT –

Naturally fresh and healthy skin is protector of body and a thing of beauty. A healthy skin will always look attractive even when devoid of make-up. Sharir-Rachana and Sharir Kriya of Twacha are the important aspects for Twacha Dushti and Twacha Roga Nirharana. Various Ayurvedic Samhitas have been referred for a detailed literature review of this concept. The layers of Twacha, its Panchabhautikatawaall have been in the article. Likewise various Twacharogas occurring in the different layers of the Twacha as per various acharyas has been mentioned. The doshic involvement, the dhatu's involvement in formation of twacha has also been mentioned. An effort to correlate the layers of skin to Twacha has also been made. In order to understand any skin disease (Twacharoga) a detailed study of the structure and function of skin is necessary. The conceptual aspect of skin needs to be understood because skin disorder is outer exhibition of some kind of internal pathology.

KEYWORDS- Twacha, Twacharoga, Skin.

I. INTRODUCTION –

The skin is a sensory organ that protects our bodies by functioning as an insulator, regulating body temperature, and covering us from the sun's destructive rays. Sharir Rachana knowledge is important because skin is the most major factor involved in the aetiology of any disease manifested in the skin. Twacha is the place of several Twacharoga. Twacha is the most important site of development and manifestation for the plurality of rogas. Almost every roga has at least one lakshana with vyaktisthan as Twacha. Twacha is a Sparshanendriyaseat. It's called a dnyanendraya. To understand the vikriti, one must first understand the prakriti. One of the most important physiological

parts and sensory organs is the skin. A deep, conceptual, microscopic study of the Sharir Rachana and Twacha is really beneficial considering skin disorders are the outward manifestations of some form of underlying sickness. Also, skin and skin illnesses have a distinct impact on personality, which is very important in current day and age, particularly in adolescence.

AIM & OBJECTIVES-

To explore Sapta Twacha's Rachanatmak reviews, as well as its modern correlation with skin layers.

II. MATERIAL AND METHOD –

Twacha-related literary material has been gathered from various Sthans (parts) of Sushruta Samhita, Charak Samhita, Sarth Vagbhata, and Modern Anatomy texts such as BD Chaurasia General Anatomy, Gray's Anatomy, and others, and has been critically discussed and correlated with modern Skin layers.

Twacha Utpatti-

According to Acharya Sushrut Twacha develops like a layer of Santanika (Cream) developed on Ksheer (Milk) after heating. The formation of Twacha results from heat generated in the process of union of Shukra and Shonita during the Garbhanirmaana Kala.¹

Acharya Charak states that development of the Twacha results from the Shukra Shonita Sanyoga and formation of all Sapta Dhatu.² Acharya Vagbhata states that the development of Twacha occurs due to Paka of Rakta Dhatu by Dhatvagni.³

According to modern texts, skin growth begins around the fourth week following fertilization. The single layer known as the basal

layer splits and creates a surface protective layer of flattened cells known as periderm at the beginning of the seventh week. By the fifth month, a fatty layer known as the vernix caseosa can be identified. By the eleventh week, the epidermis and dermis have formed, and hair follicles have begun to grow. The epidermis is generated from ectoderm whereas the dermis is derived from mesoderm, which is located deep beneath the surface ectoderm⁴.

Relation With Panchamahabhut-

Twachais a Matruja Avayava⁵. It is made up of combination of Panchamahabhutof which Vayu Mahabhutis the most important⁶.

Relation With Trimal-

Sweat (Sweda) among Trimal excreted by skin which helps to maintain body temperature.

III. CONCEPTUAL REVIEW - Rachanatmak Review OfSaptaTwacha-

According to Ayurvedic Twacha is a Sparshanendriyaseat. It is a Dnyanendriya, or sensory organ. It conveys a sense of touch. It provides exterior protection for the entire body. It also includes information about other sensory organs. Twacha (Skin) is associated with the wind element in Ayurveda (Vatadosha). It performs the function of touch, which is carried out by the wind element through the skin (Vatadosha). Bhrajakapitta, which is located in the skin, gives it colour. Sweating (sweda) is necessary for maintaining skin health. Skin development occurs during tritiyamas, or the third month of intrauterine life. The Acharya Sushruta used an appropriate example to discuss the growth of skin. The skin forms like a layer of cream on top of milk. The creation of a cream-like layer on the surface of milk occurs as a result of heating. The production of skin is caused by heat created during the union of shukra and shonita, as well as the formation of various dhatus in the foetal body. There are various points of view on how the skin develops. According to Acharya Charak, the skin develops as a result of the Shukra Shonit Sanyog and the formation of all seven dhatus. The skin develops during the production of blood, according to Acharya Vagbhat. According to Acharya Charak, the skin (Twaka) contains six layers: Udakadhara, Asrakdhara, Sidhmakilasa Adisthana, Dadrukusta Adisthana, Alajividradi Adisthana, and Arumshi Adisthana⁷.

According to Acharya Sushruta, the skin has seven different layers, each with its own structure and function. The layers are built in such a way that each layer supports the levels above it. When all of the layers of the skin are healthy and balanced, the skin as a whole is able to fulfil its overall duties successfully⁸. When these layers are impacted by imbalanced doshas (vital energetic forces of the body), it leads to a variety of skin ailments.

The Lists Of Seven Layers Of Skin And Diseases Which Originate From Them Are As Follows- Avabhasini-

This is the first outermost and superficial layer of skin. It is responsible for the color and shadows of five types i.e. Prabha. It reflects the complexion and the quality of the Rasa Dhatu (nutrient fluid, the first of the seven tissues of the body). It also acts as a mirror. It indicates whether the physiology as a whole is balanced or imbalanced, and whether there is inner health or disorder. The avabhasini layer also reflects the aura of the individual, if there is inner bliss,

it shows on this layer. It does not have its own color. It reflects the colors of the inner layers. Internal and external re-hydration and regular massage supports the health and appearance of the Avabhasini layer of the skin.

It is the site of Sidhma (psoriasis), Padmakantaka (pimples, acne), and other diseases. It is approximately 1/18th the size of Vrihi.

Lohita-

This is the second layer of skin, and it helps to support the outermost layer. It denotes Rakta Dhatu's qualities (blood). Ama (impurities) in the blood affect the aura of the outer layer and increase sensitivity to the sun. This layer has the appearance of molten iron. It is the location of Tilakalaka, or moles, dark circles, and black pigmentations. It is one-sixteenth of a Vrihi.

Shweta-

This is the skin's third layer. This is a white layer that balances the skin's complexion and lightening the darker colours of the inner layers.

Charmadala (atopic dermatitis), Ajagallika (eruption or blisters), and Mashaka are all found here (moles). It is approximately one-twelfth the size of vrihi.

Tamra-

This is the skin's fourth layer. This layer nourishes the skin's top layers. It strengthens the

immune system. This is the layer that assists the skin in performing its function as a "barrier." Skin infections are the result of an imbalance in this layer. It is copper in colour.

It is the site of various sorts of skin illness, such as leprosy. It is approximately 1/8th the size of Vrihi.

Vedini -

This fifth layer sensually links the skin to the rest of the body. It is the center for transformation of sensation – eg. feeling of pain.

It is the seat for Kushtha and Visarpa (herpes). It measures 1/5th part of Vrihi.

Rohini-

It is the sixth layer that gives rise to the Roma Kupa. It helps in healing and regeneration. Imbalance in this layer slows healing and causes scars to fade over time. The Rohini layer is supported by a well-balanced, nutritionally dense diet.

It is the seat for Granthi (cysts), Apache (scrofula/lymphadenopathy), Arbuda (Harcors cancer/tumors), Shlipada (elephantiasis) and Galaganda (goiter). It measures about 1 Vrihi.

Mamsadhara-

In respect to close contact with mamsa, it is the seventh and deepest layer. It serves as the foundation for the skin's stability and stiffness. When this layer is balanced, the skin appears youthful and supple. A skin care product with a Vayasthapanaction nourishes this layer, which helps to slow the ageing process.

It is the site for Bhagandar (fistulas), Vidradhi (abscess) and Arsha (haemorrhoids). It measures about two Vrihi.

Mamsadhātu provides nutrients to the seven layers of skin (muscle tissue). It is also referred to as an Upadhātu (secondary tissue product) of the Mamsadhātu (muscle), which arises from Raktadhātu (blood), because it simply resembles the dhātu's perception of the body. It does not perform Poshankarma, i.e. it does not nourish the other dhātus. Skin is a mirror that reflects the attributes of the Raktadhātu (blood) and the Rasadhātu (body's plasma tissue) because it is an Upadhātu of the Mamsadhātu that emerges from Raktadhātu. As a result, it is a prevalent belief that radiant skin is the result of high-quality rasa and Rakta.

To understand the Doshic physiology of Twaka, a basic physiological anatomy of Twaka (skin) is required. The thickness of the Twaka layers stated above is frequently related to the skin over

the muscular regions of the body, but not to the skin over the forehead or the little fingers. In the abdomen, incisions are marked as thick as a thumb breadth; this shows the thickness of the skin of the belly. Before undergoing surgery, it is critical to understand this anatomical diversity.

A/C To Modern Health Science-

It is the body's largest organ in terms of surface area and weight. The skin of an adult covers an area of around 2 square metres and weighs 4.5-5kg. It ranges in thickness from 0.5 to 4.0 mm depending on region. The sole of the foot, palm of the hand, and interscapular region all have thick skin (5mm). Over the eyelids and penis is thin skin (0.5mm).

STRUCTURE –

It consists of two layers

- 1) Epidermis
- 2) Dermis

Epidermis-

The superficial, thinner portion is made up of stratified epithelium.

The epidermis lacks blood vessels. Nutrition is provided through dermal capillaries.

Layers Of Epidermis-

1. Stratum Corneum (Corneum= Horny)-

This layer is made up of 25–30 layers of flat, dead cells that are entirely packed with keratin. These cells are constantly shed and replaced by cells from the deeper layers.

2. Stratum Lucidum (Lucidus=Clear) –

This layer's cells all have a gleaming look. This layer can be found in the thick skin of the palms and soles, but it is absent in the thin skin. It is made up of 3-5 layers of transparent, fat, dead cells containing molecules of an intermediate material that is eventually turned into keratin.

3. Stratum Granulosum (Granulum=Little Grain)-

This layer is made up of 3-5 layers of flattened cells that produce darkly stained keratohyalin granules.

4. Stratum Spinosum (Spinosum=Thorn Like Or Prickly)-

This layer is made up of 8-10 layers of polyhedral cells that are tightly packed together.

5. Stratum Germinativum (Germ=Sprout)-

This single layer of cuboidal to columnar cells contains stem cells, which can divide indefinitely, as well as melanocytes. The stem cells divide and

divide again, forming keratinocytes that push up into the more superficial layers.

Epidermis-Contain 4 Types Of Cells

1.Keratinocytes-

Keratinocytes make up approximately 90% of epidermal cells.Keratin is a protein that they make. Keratinocytes are epidermal cells that develop from stem cells found in the basal layer. Intermediate stem cells go through mitosis again. After that, there will be no further cell divisions.

2.Melanocytes –

About 8% of epidermal cells are melanocytes which produce the pigment melanin.

3. Langerhans Cell-

These cells form in the bone marrow and move to the epidermis. In immunological reactions, they interact with white blood cells known as helper T cells and are easily destroyed by UV radiation.

4.Merkel Cell-

These cells are found in the epidermis's deepest layer. Sensory nerve endings can be found in these cells in the epidermis' basal layer.

Dermis-

It is made up of connective tissue containing collagen and elastic fibers.The few cells in the dermis include fibroblasts, macrophages and adipocytes. The dermis has superficial and deep parts.

- 1) **Papillary layer (region)** – It is the superficial part and forms about one fifth of the total thickness of the dermis. It consists of areolar connective tissue containing fine elastic fibers.
- 2) **Reticular layer (region)** – It is the deeper part of the dermis.It consist of dense, irregular connective tissue containing interlacing bundles of collagen and some coarse elastic fibers.

Glands Of The Skin -

Several kinds of glands are associated with the skin: sebaceous glands, sweat glands, ceruminous glands and mammary glands.The mammary gland are the modified sweat gland.

Nerve Supply – Superficial part of dermis by sensory nerves, and by autonomous nerve supply to smooth muscles in the wall of blood vessels and sweat glands.

Function Of Skin-

- 1) **Protection** – against UV rays, mechanical blow, bacteria and toxic substances.
- 2) **Sensation** – Touch, pain, pressure and temperature.
- 3) **Storage** – Fat, water, chloride, sugar blood by cutaneous vasodilation.
- 4) **Synthesis of vitamin D.**
- 5) **Regulation of body temperature**–Heat loss by blood by cutaneous vasodilation, lipid content of sebum prevents loss of heats.
- 6) **Water and electrolyte balance** – by excreting water and salt through sweat.
- 7) **Excretion** – excretes small amount of urea, salts and fatty substance.
- 8) **Absorption** – absorbs fat soluble substances and some ointments.

IV. DISCUSSION-

The outermost layer, Avabhasini, is responsible for pigmentation and the five forms of shadows,i.e.Prabha, and it is the location of psoriasis, pimples, and acne. It corresponds with the Horne layer of the epidermis.Lohita is the second layer that supports the outermost layer and is the location of moles,dark, circles,and black pigmentations. It corresponds with the Stratum Lucidum layer of the epidermis. The third layer, Shweta, balances skin colour and is the site of atopic dermatitis, boils or blisters, moles, and connects with the epidermis's Stratum Granulosum layer. The fourth layer Tamra,which connects with the Malphagianlayer of the dermis, supports the immune system and is the site of leprosy. The fifth layer Vedini, which corresponds to the Papillary layer of the dermis, is a hub for sensation transformation and the site of leprosy and herpes. The 6th layer Rohini promotes healing and regeneration and is the site of cysts, scrofula/lymphadenopathy, cancer, tumours, elephantiasis, goitre, and connects with the dermal Reticular layer. Mamsdhara, the 7th innermost layer, provides the foundation for the skin's stability and hardness, as well as the site of fistulas, abscesses, and haemorrhoids, and it correlates with subcutaneous tissue and muscles. Vatadosha's sense of touch is carried out through the skin. Bhrajakapitta colourizes the skin.

V. CONCLUSION-

The skin (Twacha) is an important visible organ of the body. It plays a significant role in one's personality. As a result, skin problems (Twacha) have an impact not only on the physical

but also on the psychological levels. To understand the condition, one must first understand the normal echo- exture. As a result, proper skin condition (Twacha) is required. As a result, the SharirRachana and Kriya of TwachaSharir must be thoroughly learned. Because skin is one of the sense organs, it promotes in learning. It is, in a sense, a covering over the entire body, both externally and inside.

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