

CONCEPTUAL STUDY OF RASA-SARATA WITH SPECIAL REFERENCE TO COSMETOLOGY

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ABSTRACT

Background: Cosmetology deals with beautification of skin, hair and face. It is accomplished with the application of lotion, cream on skin or with other techniques like microdermabrasion, cosmetic electrotherapy etc. While it may serve the purpose, it fails to provide everlasting solution. On the top of that many cosmetic products come with side effects that can be devastating in the short term and incapacitating in the long run. *Ayurveda* can be a guiding light in our quest of healthy skin. **Method:** We are going through available *Ayurveda* literature like *Samhitas* and *granthas* regarding *Rasa sarata* and *Rasa dhatu*. In this paper we are going to understand and analyse this concept in detail. **Results:** According to *Ayurveda* healthy and glowing skin is characteristic of *Rasa sarata*. The concept of *Rasa sarta* is one of the unique concepts that can be explored and used in cosmetology. From its formation in the body to causes behind its vitiation will be discussed. We will also discuss at length the line of treatment that can

be adopted and measures for its maintenance in a healthy state. **Conclusion:** It involves transformation in the basic metabolism pathways concerned with skin in a natural way. It's positive effect on other systems and whole body as such will be added bonus. Use of cosmetic products and its side effects can be minimised. This approach may results in culmination of new branch of science named *Ayurveda* cosmetology in future.

KEYWORDS: *Rasa-Sarata*, *Rasa Dhatu*, Skin, Cosmetology.

INTRODUCTION

The outward appearance of a person is the first thing that catches the eye of others. Therefore, being presentable at all time has become an asset for any person in this modern world. This necessity of being presentable has the origin of cosmetology. It deals with various beauty treatments on a person to improve the overall appearance. Cosmetology also deals with many kinds of wellness treatment which involves massage followed by aftercare advice to clients. Sometimes cosmetologist also suggests balanced diet and nutrition and daily exercise regimen to maintain a healthy lifestyle. Beauty and wellness sector which is another name for cosmetology is registering exponential growth and can be one of the lucrative sector attracting millions of dollars for research and product development. *Ayurveda* can give whole new perspective to cosmetology and bring about paradigm shift in the approach in beauty care and wellness.

RATIONALE OF THE STUDY

Cosmetology deals with application of various products like ointments, lotions, soaps, etc. It also deals with various beauty techniques like bleaching, waxing, make-up and what not. It may serve the purpose but as its effects are temporary, it has to be used repeatedly. With the advancement of age, treatments like these fail to generate same effect. In such scenario, the concept of *Rasa-Sarata* and its origin *Rasa Dhatu* can be a game changer. In this article, the concept of *Rasa Dhatu* will be explored from the modern as well as *Ayurvedic* perspective.

MATERIAL AND METHOD

Ayurvedic samhitas ie. *Charak Samhita*, *Sushrut Samhita* and *Ashtang-hridaya*, on line journals and articles, database was reviewed for *Rasa- Sarata* concept. Textual analysis of the gathered information regarding topic was done. Parallels among both Modern and *Ayurveda* perspective were drawn.

RESULT

Purpose of defining a concept of *Sarata* is to make inference about qualitative assessment of *Dhatu*. It is a parameter on which we can analyse *Bala* of each *Dhatu*.^[1] *Chakrapani* has equated *Sarata* of *Dhatu* with purity of that *Dhatu*.^[2] According to ancient *Ayurvedic* literature, *Bala* can be acquired by birth. *Bala* also depends on season, life-style and diet.^[3]

Sarata of *Rasa Dhatu* is assessed through examination of skin.^[4] A person with following attributes is said to be *Twakasara*.^[5,6,7]

Attributes of *twakasara*

SR. NO.	CHARAKA	SUSHRUTA	KASHYAPA
1	<i>Snigdha</i>	-----	<i>Snigdha</i>
2	<i>Shlakshana</i>	-----	-----
3	<i>Mridu</i>	<i>Mridu</i>	-----
4	<i>Prasanna</i>	<i>Prasanna</i>	-----
5	<i>Sukshma loma</i>	-----	-----
6	<i>Alpa loma</i>	-----	-----
7	<i>Gambhira loma</i>	-----	-----
8	<i>Sukumara loma</i>	-----	-----
9	<i>Sa prabha</i>	-----	<i>Nirmala</i>
10	-----	-----	Absence of skin diseases
11	-----	-----	Rapid wound healing

As *Twakasara* is squarely dependent on the quality of *Rasa Dhatu*. It is imperative that we have to look at *Rasa Dhatu* from all aspects.

Rasa dhatu

The word *Rasa* is derived from *Rasa* “*gatau*” *Dhatu*.^[8] The entity which is flowing continuously is called *Rasa*. Function of *Rasa Dhatu* in body is *Preenana*.^[9] Meaning of *Preenana* according to *Apte Sanskrit to English dictionary* is satisfying or refreshing. *Rasa Dhatu* provides hydration, moisture and micro-nutrients essential for the maintenance of skin health. *Kapha* and *Pitta* both are associated with it. Vitiating of either one of them or both of these *Doshas* bring about pathological changes in it. According to *Charaka Samhita* skin formation is maternal entity.^[10] At formation of the embryo, part that is going to be skin is dependent on the quality of mother’s diet and life style. If its quality is good obviously the new born will have healthy skin.

Aetiology of *rasa dushti*^[11]

- Diet which takes longer time to digest
- Food which is served cold
- Food that contains more fats than usual
- Food consumed more than one’s digestive capacity
- Excessive worrying

Symptoms associated with *rasa dushti*^[12]*Pandutva* --Pale skin*Ayatha kala Valaya* --Pre-matured Wrinkles, dark patches on skin*Ayatha kala Palitya* --Pre-matured Greying of hair**Treatment of *rasa dushti*^[13]**

Rasa dushti is treated with *Langhana*. *Charaka* has described ten types of *Langhana* which are;

- *Vamana* Expulsion of *Doshas* by vomiting
- *Virechana* Expulsion of *Doshas* by purgation
- *Shiro-virechana* Expulsion of *Doshas* by nasal discharge
- *Basti* Expulsion of *Doshas* by medicinal enema
- *Pipasa nigraha* Water deprivation
- *Marut sevana* Exposure to strong winds
- *Atap sevana* Exposure to Sun rays
- *Pachana* Medicines that help in digestion
- *Upavas* Fasting
- *Vyayama* Exercise

Anatomy and physiology of the skin^[14]

Anatomically, the skin consists of three distinct layers: the epidermis, the dermis and subcutaneous tissue. The epidermis which is protective layer consists of a multi-layered, keratinising, stratified, squamous epithelium. The outermost part of the epidermis is dead stratum corneum. The stratum corneum prevents water loss from body. It also denies noxious agents in the environment as well as solids and liquids coming into contact with it, an unlimited access to the metabolically active deeper layers of skin. The dermis is a thick, highly vascular layer made up of ground substance, fibroblasts and collagen fibres, together with appendages of the skin, sweat glands and pilo-sebaceous follicles, embedded in it. This layer is richly supplied with nerves. It is metabolically active part of the skin. The subcutaneous tissue is a fibro-fatty layer with varying quantities of adipose tissue in different region of body. This layer provides physical and thermal protection to the deeper structures of body.

Role of cosmetology in skin care^[15,16]

Role of cosmetology in skin care is particularly important in two areas i.e. maintaining radiance of the skin and reducing or masking age related changes like wrinkles or sagging. Complexion looks radiant when it is smooth enough to reflect light. With advancing age, skin cells turn over time is increased, leading to piling of dead skin cells diffusing the light and making skin dull. Exfoliation is done in cosmetology to slough it away. Hence choice of medicine changes with type of the skin whether oily or dry. Some of the drugs are Glycolic acid, Salicylic acid, ceramide and retinoids. Use of highlighter which is available in cream and powder forms is also advocated. Skin aging is complex biological process influenced by combination of intrinsic and extrinsic factors.

Factors affecting skin ageing

INTRINSIC FACTORS	EXTRINSIC FACTORS
Genetics	Chronic light exposure
Cellular metabolism	Pollution
Hormones	Ionizing radiation
Metabolic processes	Chemicals and toxins

In contrast to thin and atrophic, finely wrinkled and dry intrinsically aged skin pre-matured aged skin typically shows a thickened epidermis, mottled discolouration, deep wrinkles, laxity, dullness and sagging.

Treatment modalities used are as follows;

Treatment modalities in modern medicine

COSMETOLOGICAL CARE	<ul style="list-style-type: none"> • Daily skin care • Correct skin protection • Aesthetic non-invasive procedures
TOPICAL AGENTS	<ul style="list-style-type: none"> • Antioxidants • Cell regulators
INVASIVE PROCEDURE	<ul style="list-style-type: none"> • Chemical peelings • Visible light devices • Intense pulsed light • Ablative and non-ablative laser photo-rejuvenation • Radiofrequency • Injectable skin bio-stimulation and rejuvenation • Prevention of dynamic wrinkles • Correction of static, anatomical wrinkles • Restoration of fat and volume loss • Skin augmentation
SYSTEMIC AGENTS	<ul style="list-style-type: none"> • Hormone replacement therapy • Antioxidants
AVOIDANCE OF	<ul style="list-style-type: none"> • Smoking

EXOGENOUS FACTORS	<ul style="list-style-type: none"> • Pollution • Solar UV irradiation • Stress
PREVENTIVE MEDICINES	<ul style="list-style-type: none"> • Nutrition, diet restriction • Physical activity

Free radicals and skin damage^[17]

A free radical is defined as a chemical species possessing an unpaired electron. The term reactive oxygen species is often used to include not only free radicals (OH^\cdot , HOO^\cdot , and NO^\cdot) but also the non- radicals (O_2 , ONOO^\cdot , H_2O_2). It is formed by all aerobic organisms, leading to a state called oxidative stress. It leads to oxidation of DNA: strand break, DNA- protein crosslinks, and sugar damage. It in turns leads to cell death, chromosome changes, mutation and morphological transformation. Besides oxidation of nuclear DNA, there is oxidative damage to mitochondrial DNA (mDNA). This is the mechanism behind skin ageing and skin cancers.

Antioxidants and skin- care^[18]

Use of antioxidants basically is sought to neutralise excess free radicals, reducing or preventing the attack on cellular structures.

MECHANISM OF ANTIOXIDANT ACTION

MOLECULES:	MECHANISM OF ANTIOXIDANT ACTION
VITAMIN E:	Neutralization of single oxygen in the cell membrane
VITAMIN C:	Removal of free radical and repair of oxidised Vit. E bound to cell membrane
POLYPODIUM: LEUCOTOMOS:	Inhibition of UV induced ROS generation
LYCOPENE	Neutralisation of single oxygen
LUTEIN	Protects fibroblast
RESVERTOL	Inhibition of oxidative action to DNA
GREEN TEA	Scavenging action of free radical
LIPOLIC ACID	Repair of endogenous antioxidant systems

Antioxidants and Food^[19]

FRAP [ferric reducing ability of plasma] analysis is one of the tests to measure antioxidant content of food. Antioxidants are found in many fruits like berries, apple, resins, carrot, and beans.

DISCUSSION

As *Rasa Dhatu* has maternal origin, one way will be to educate women who want to conceive. They should undergo treatment modalities like *Panchakarma* and other *Langhanas* as per level of vitiation of *Rasa Dhatu*. They should be advised to avoid food that can bring about vitiation of *Doshas*. Also healthy change in lifestyle can be advised which will ensure that baby born will have good healthy skin at the outset.

Avoidance of causative factors i.e. *Hetu* along with *Langhana* will help in achieving healthy skin. Treatment with one or the other modality described under *Langhana* can be applied to person depending on one's health.

Radiance of the skin depends on *Bhrajaka Pitta*. Instead of using only exfoliation as treatment, combination of *Shodhana* (*Virechana* and *Raktamokshana*) and *Shamana* (external application of *lepas*) can be used.

Pandutva or paleness is one of the symptoms caused by vitiation of *Rasa Dhatu*. We can use treatment modalities described in *Pandu* depending upon type of *Dosha* involved.

Sustaining good quality of *Rasa Dhatu* throughout life is essential. It will help in delaying skin ageing. *Ayatha kala valaya* or early wrinkles is one of the symptom of *Rasa Dhatu* vitiation. *Langhana* can be used to combat this ailment. Use of *Rasayana* can be added to supplement it.

Alpa Loma or scanty skin hair is also one of the attribute of *Rasa Sarata*. *Langhana* can also be used to achieve it so that it will minimise frequency of use of waxing.

Starvation increases oxidative stress. *Tarpana* made up of fruit juice, roasted gram flour and sugar are rich in antioxidant. Along with water, minerals and glucose, it also helps body with antioxidant activity.

One of the major causes of skin dullness and early aging is free radicals. It is by-product of various metabolic processes on going inside the cell. These free radicals damaged cells resulting in various skin ailments in the long run. Some of these are cancer, cardio vascular diseases and skin aging. Research has shown that overeating results in increased production of free radicals. Fasting in moderation helps in reducing free radicals. More research on these lines is needed so that a clear relationship can be established.

CONCLUSION

Concept of *Rasa Dhatu* and *Rasa Sarata* can be applied in cosmetology to improve skin health. It will also bring about sustainable change in it. More over skin care before the birth is unique concept. Many of the invasive procedure can be avoided. All of which will benefit a person seeking cosmetic solution for skin health. Skin care with *Ayurveda* perspective can be new branch of science, if further initiated with proper academic frame work.

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