

**LIVER AND SKIN DISEASE - AYURVEDA REVIEW**

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**ABSTRACT**

Liver is a vital organ play a major role in metabolism and excretion of waste products from the body. The liver has a wide range of functions, including detoxification various metabolites, protein synthesis, and the production of biochemicals necessary for digestion. The liver's main job is to filter the blood from the digestive tract, before passing it to the rest of the body. The liver also detoxifies chemicals and metabolizes drugs. As it does so, the liver secretes bile that ends up back in the intestines. The liver also makes proteins important for blood clotting and other functions. Skin functions as antimicrobial, chemical and mechanical barrier. Description of skin diseases are spread over in

various samhita in many chapters. Two broad categories in which skin diseases are mentioned as kustha roga and ksudra roga. Other common headings wherein skin disease are mentioned as visarpa, nanatmaj vyadhi, bahya vidhradhi, shukadosha, prmeha-pidika, granthi, apachi, arvuda, upadansh, shilipada, and shoth. In Ayurveda literature, skin diseases are described in various texts charaka samhita, sushrut samhita, Vagbhatta and some other popular texts such as Vangsan, Sharngdhar and Cakradatta.

**KEYWORDS:** Liver, skin disease.

**INTRODUCTION**

The liver is a vital organ of vertebrates and some other animals. In the human it is located in the upper right quadrant of the abdomen, below the diaphragm. It has been well recognized that individuals having a healthy body can only properly afford to perform all the activities

leading to happiness, heaven and salvation and for the preservation of health, an alertness to wards Ahar (food) is essential as it is a basic factor for the attainment of all of them, Considering the utility of Ahar, Charak had stated that it sustains the life of living beings and in this universe they run after it. Complexion, clarity, good voice longevity, geniusness, happiness, satisfaction, nourishment, strength and intellect are all conditioned by Ahar (food) Biogenic contribution of Ahar in terms of metabolic transformations being directly governed by Jataragni (acids & enzymes responsible of gastrointestinal digestion) and the resultant effects apparently seen in maintenance of body. ,,

**LAYERS OF SKIN** Skin is made up of two layers.

- I. Outer epidermis
- II. Inner dermis. ,,

### **EPIDERMIS**

Epidermis is the outer layer of skin. It is formed by stratified epithelium. Important feature of epidermis is that, it does not have blood vessels Nutrition is provided to the epidermis by the capillaries of dermis. Layers of Epidermis Epidermis is formed by five layers.

1. Stratum corneum
2. Stratum lucidum
3. Stratum granulosum
4. Stratum spinosum
5. Stratum germinativum.

**Layers of Dermis**

Dermis is made up of two layers

1. Superficial papillary layer
2. Deeper reticular layer.

Bile salts – high level of bile salts accumulating under the skin, which may cause itching.

Some people with pruritus have raised histamine levels.

**The Functions of the Liver**

Liver is the largest gland and one of the vital organs of the body. It performs many vital metabolic and homeostatic functions, which are summarized below. ,,

## 1. METABOLIC FUNCTION

Liver is the organ where maximum metabolic reactions such as metabolism of carbohydrates, proteins, fats, vitamins and many hormones are carried out. ,,

## 2. STORAGE FUNCTION

Many substances like glycogen, amino acids, iron, folic acid and vitamins A, B12 and D are stored in liver. ,,

## 3. SYNTHETIC FUNCTION

Liver produces glucose by gluconeogenesis. It synthesizes all the plasma proteins and other proteins (except immunoglobulins) such as clotting factors, complement factors and hormonebinding proteins. It also synthesizes steroids, somatomedin and heparin.

## 4. SECRETION OF BILE

Liver secretes bile which contains bile salts, bile pigments, cholesterol, fatty acids and lecithin. The functions of bile are mainly due to bile salts. Bile salts are required for digestion and absorption of fats in the intestine. Bile helps to carry away waste products and breakdown fats, which are excreted through feces or urine. ,,

## 5. EXCRETORY FUNCTION

Liver excretes cholesterol, bile pigments, heavy metals (like lead, arsenic and bismuth), toxins, bacteria and virus (like that of yellow fever) through bile. ,,

## 6. HEAT PRODUCTION

Enormous amount of heat is produced in the liver because of metabolic reactions. Liver is the organ where maximum heat is produced. ,,

## 7. HEMOPOIETIC FUNCTION

In fetus (hepatic stage), liver produces the blood cells. It stores vitamin B12 necessary for erythropoiesis and iron necessary for synthesis of hemoglobin. Liver produces thrombopoietin that promotes production of thrombocytes. ,,

## 8. HEMOLYTIC FUNCTION

The senile RBCs after a lifespan of 120 days are destroyed by reticuloendothelial cells (Kupffer cells) of liver. ,,

## 9. INACTIVATION OF HORMONES AND DRUGS

Liver catabolizes the hormones such as growth hormone, parathormone, cortisol, insulin, glucagon and estrogen. It also inactivates the drugs, particularly the fatsoluble drugs. The fat-soluble drugs are converted into watersoluble substances, which are excreted through bile or urine. „

## 10. DEFENSIVE AND DETOXIFICATION FUNCTIONS

Reticuloendothelial cells (Kupffer cells) of the liver play an important role in the defense of the body. Liver is also involved in the detoxification of the foreign bodies.

- i. Foreign bodies such as bacteria or antigens are swallowed and digested by reticuloendothelial cells of liver by means of phagocytosis.
- ii. Reticuloendothelial cells of liver also produce substances like interleukins and tumor necrosis factors, which activate the immune system of the body.
- iii. Liver cells are involved in the removal of toxic property of various harmful substances. Removal of toxic property of the harmful agent is known as detoxification.

iv. Detoxification in liver occurs in two ways:

- a. Total destruction of the substances by means of metabolic degradation.
- b. Conversion of toxic substances into nontoxic materials by means of conjugation with glucuronic acid or sulfates.

The liver has many essential roles in keeping us alive, including.

Blood Purification – as the journey of liver start throughout the body, the blood from stomach and intestine is the liver and it prevent the contaminants and also removes the waste product from the body such as.

Drugs

- Bacteria
- Fungi
- Viruses
- Pesticides and herbicides
- Chemicals
- Fats
- Alcohol

## Detoxification

Liver also perform the function of detoxification as it detoxifies alcohol, heavy metal, drugs, chemicals, toxic by product from the blood. Housing an ingenious cleaning system, the liver detoxifies infectious organisms, alcohol, heavy metals, drugs, chemicals, toxic by products and other poisons from the blood.

## AIMS AND OBJECTIVES

Correlation between the liver and skin diseases

### SAMPRAPTI (PATHOGENESIS)

Vitiated Vata, Pita, Kapha gets involved with Twak (Skin), Rakta (Blood), Mamsaa (muscle tissue) and Ambu (body fluid). These are called Sapta Dravyas (haptoids). The Nidan described regarding Kushtha can be divided into sharirik (mainly Pitta Vardhak Ahar, Vihar) and Manasik (Bhaya, Krodha, Santap ect) leading to formation of Sama Pitta which ultimately leads to formation of Sama Rasa Dhatu alongwith Kapha and Vata. Pitta is Saman Guna Bhuista (similar in nature) to Rakta Dhatu so it is vitiated more, eg. Just like in Prameha main Dosha is kapha (along with others) and it first involves mode Dhatu being similar in nature, Due to vitiated Pitta there is altered Ranjan karma (Colouration) of Rasa Dhatu in Yakrit & Pleea leading to formation Dusta Rakta Dhatu. The Dusta Rakta circulates all over the body through Raktavaha Srotas (involving Mansavaha & Ambuvaha also). The through the Uttan Siras (Superficial arteries & veins) it despises the Twak (skin) leading to production of Kushtha (skin disorder).

## RESULT AND DISCUSSION

Diet Vitiating Rakta (Blood),

Vegatables like – brinjal, mustard, turmeric, garliac, sour pickle, capcicum and usna and tikshna aahar.

Enumerating the diseases resulting form vitiation of blood like

- Stomatitis, Conjunctivitis, Rhinitis, foul smell (odour) from mouth, Upakush (type of mouth disease)
- Abdominal tumour
- Visarpa (Skin disease characterized by acute spread)
- Raktapitta (disease characterized by bleeding form different parts of body)
- Pramalak (drowsiness) - Abscess, haematuria, menorrhagia
- Gout

- Suppression of the digestive power
- Heaviness of body, thirst, burning sensation
- Anorexia, Headache, Bitter sour eructations specially of diet and drinks that are not properly digested, Saline taste in mouth.
- Excessive anger, intoxication, excessive sleep
- Frequent attacks of faintings
- Pruritis, urticaria, eruption, pimples, obstinate skin disorders, leprosy, dermatoses etc are falling under this category. The curable diseases do not get cured by cold, heat, unctuous, drying and such other therapies. They are to be taken as diseases due to vitiation of blood.

## CONCLUSION

Among the principles of treatment of skin disorders, Raktashodhan (Blood purificatory measures) has got equal importance. Since the period of our samhitas it is being adapted by Ayurvedic Physicians. As Yakrit (liver) and Pleeha (Spleen) are the Mulas (root) of Raktavaha srotas (Blood circulatory channels) on the basis of modern scientific research, again we have researched the same conclusion that good functioning of liver is the them for prevention of skin disorders even.

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