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# An exploratory analysis of probable role of *Pathya* and Apathya in skin disease

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# ABSTRACT

Every living and non-living being in this universe is composed of five basic elements, the Pancha Mahabhuta. The Pancha Mahabhuta components of the ingested food nourishes their respective tissue elements in the body. Ahara is the best of all medicines and is considered one among the Trayopsthamba. The main idea of Pathya Ahara and Vihara serves as the foundation for both the preventive and therapeutic components of Ayurveda. Ayurveda places a strong emphasis on fundamental dietary principles, or Ashtavidha Ahara Vidhi Visheshayatana. Skin is given due importance since time immemorial owning to the aesthetic value conferred upon it. Skin diseases are mainly described under the spectrum of Kushtha. Dietary modifications have hitherto received little attention in dermatological therapy. However, recent studies have discovered a strong link between various dermatological conditions and food. Ayurveda describes a wide range of etiological factors for dermatological disorders. Consumption of Ahara such as Ati-Lavana, Ati-Amla, Viruddhahara, Guru-Snigdha Annapana, Ajeernahara plays a significant role in the development of skin disease. Excessive intake of food items like Dadhi, fish with milk, Masha, Mulaka, Tila, Madya further contribute to Kushtha. In this article an attempt is made to highlight the probable role of Apathya and emphasize the scope of Pathya Ahara in the management of skin disease.

Key words: Pathya, Apathya, Skin disease, Viruddhahara, Kushtha

# INTRODUCTION

Every living and non-living beings in this universe is composed of five basic elements, the Pancha-Mahabhuta. Food that has been consumed nourishes the body's many tissue constituents through the Pancha-Mahabhuta component. Ahara is the best of

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all medicines and is considered one among the Trayopsthamba. The Ahara and Vihara that are compatible with a person's constitution and strength are referred to be Pathya or wholesome, while those that are not compatible are referred to as Apathya or unwholesome. The main idea of Pathya Ahara and Vihara serves as the foundation for both the preventive and therapeutic components of Ayurveda. The fundamental dietary principles of Ashta Vidha Ahara Vidhi Visheshayatana - appropriate food, combinations of food, cooking techniques, storage, eating environment are stressed by Ayurveda.

Skin is given due importance since time immemorial owning to the aesthetic value conferred upon it. Skin diseases are mainly described under the spectrum of Kushtha. Dietary modifications have hitherto received little attention in dermatological therapy. However,

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recent studies have discovered a strong link between various dermatological conditions and food.

#### Prevalence

In India in 2017, the number of years spent with a disability as a result of skin and subcutaneous illnesses was 4.02% of the total number of years. Between 1990 and 2017, the total number of age-standardized years with disability for all skin and subcutaneous illnesses increased by 53.7%. Dermatitis provided the most years lived with disability among skin and subcutaneous illnesses in 2017, followed by urticaria, with percentage increases of 48.9% and 45.7%, respectively.<sup>[1]</sup>

#### **AIMS AND OBJECTIVES**

The article aims at exploring and reviewing probable role of *Apathya* and scope of *Pathya Ahara* in skin disease.

### **MATERIALS AND METHODS**

The data and review materials are taken from various Ayurvedic classical texts, other published papers and articles to get a better insight into the topic.

#### Apathya in Skin diseases

The Atharvaveda describes the *Twak Roga* under the name *Kilasa, Palita*, with a clinical picture of grey and white spots that typically originate from deeper layers of skin. *Kushtha* is almost commonly divided into *Maha Kushtha* and *Kshudra Kushtha*, however there are disagreements over the number within each group.<sup>[2]</sup> Ayurveda describes a wide range of etiological factors for dermatological disorders. The causative factors of *Kushtha* can be categorized under *Aharaja Nidana*, *Viharaja Nidana* and *Acharaja Nidana*.

Table 1: Shows various etiological factors in thedevelopment of skin disease.

#### Apathya in Skin disease

SN	Type of Intake	Subtype	Modern correlation
1.	<i>Atisevana</i> (excessive intake)	Rasa	Excessive intake of <i>Amla</i> (sour) <i>, Lavana</i> (salty) and <i>Katu</i> (pungent) <i>Rasa</i>

		Guna	Diet having <i>Guru</i> (heavy) and <i>Snigdha</i> (unctuous) properties.
		Dairy products	Excessive intake of <i>Dadhi</i> (curd) <i>, Takra</i> (buttermilk) and <i>Kshira</i> (milk).
	Grains	Navadhanya (newly harvested grains) <i>, Nispava,</i> Uddalaka	
	Pulses	<i>Kullatha</i> and <i>Masa</i> (black gram)	
	Anupa Mamsa	Meat of animals from marshy region, <i>Matsya</i> (fish), <i>Varaaha</i> (pig).	
	Sweet substances	<i>Guda</i> (jaggery) <i>, Madhu</i> (honey) and <i>Phanita</i> (jaggery by product)	
	Oils	Sarsapa (mustard), Kusumbha (safflower) and Tila (sesame)	
		Vegetables	<i>Mulaka</i> (raddish) <i>, Lakuch</i> and <i>Kakamaci</i> (black nightshade)
		Others	<i>Pista Anna</i> (rice preparations), alcoholic preparations
2.	<i>Mithya Ahara</i> (improper diet)	Food	<i>Vidahi</i> (food that causes burning), <i>Vidagdha</i> (improperly digested food) and <i>Puti Anna</i> (putrefied food).
		Diet pattern	Asatmya Bhojana (uncongenial food), Ajirna Bhojana (intake of food before previous food is properly digested), Atibhojana (over-eating)
3.	Viruddha Ahara		Intake of incompatible diet

# Pathya Ahara in skin diseases

Nidana-Parivarjana (avoiding causative factor) slows the pathogenesis of the disease in the body. Therefore, Pathya has a major role in each disease.

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In diseases like dermatitis herpetiformis, dietary restrictions play a major role in treatment. Dietary habits also play some role in diseases such as atopic acne vulgaris, dermatitis, psoriasis vulgaris, pemphigus, and urticaria. Genetic and metabolic disorders such as phenylketonuria, tyrosinemia, homocystinuria, galactosemia, Refsum's disease, glucose-6-phosphate dehydrogenase deficiency, xanthomas, gout, and porphyria also require dietary modifications.<sup>[3]</sup>

Intake of low calories diets and gluten free diets have shown significant improvement in psoriasis.<sup>[4]</sup>

The various Pathya include Laghu-Anna, Tikta-Shaka, Purana-Dhanya, Jangala Mamsa, Mudga, Patola, Nimba, Triphala, Shali, Shastika, Yava, Godhuma, Masura, Makshika, Pana- Pariseka- Avagaha of Khadira Kashaya, Bakuchi.

#### Single drugs useful in Kushtha

Manjishtha, Sariva, Khadira, Haridra, Bhallataka, Aragvadha, Karveera, Bakuchi, Vidanga, Jati, Haritaki.

#### DISCUSSION

#### Role of Apathya

Excessive consumption of *Lavana Rasa* provokes the *Pitta*, increases the blood volume, aggravates *Rakta*, aggravates the dermatic-lesion, depletion of the muscle tissue.<sup>[5]</sup> Excess use of *Lavana*, *Amla* & *Madhura Rasa* leads to *Kapha* & *Rakta Dushti* finally leading to *Kushtha*. It also increases *Doshika Lakshana* of the disease e.g., *Kandu*, *Rakta-Varnata*, & increases *Mandalotpatti*. According to a study on electrolytes in psoriasis patients, salivary sodium levels were higher in psoriasis patients, while potassium levels were linked to the severity of the condition.<sup>[6]</sup>

The *Madhura Rasa* diminishes *Agni* thereby hampering the digestion and leading to *Ama* production. It produces various *Kapha* disorders.<sup>[7]</sup> The *Madhura Rasa* causes *Ama* and *Ajirna*. Intake of *Phanita* causes *Abhishyandi*, *Tridosha-Prakopaka*, *Acchinoti* i.e., it is the cause for *Dosha Sanchaya*.<sup>[8]</sup>

Intake of *Amla Rasa* causes vitiation of *Rakta Dhatu* and loosening of *Mamsa Dhatu*. It also aggravates *Pitta Dosha* and results in suppuration of wounds.<sup>[9]</sup>

*Viruddhahara*, excessive consumption of *Dadhi* etc. are the major causes of *Kushtha*.<sup>[10]</sup> Unwholesome food, excessive consumptions of cold drinks, red meat, red chilli, hot spices, junk foods, oily foods, tomato, most acidic food etc. acts as a triggering factor for psoriasis.<sup>[11]</sup> *Viruddhahara* vitiates *Agni* leading to *Agnimandya*, does *Srotodusti* and produces *Ama*. It further produces *Dushi Visha* which tend to vitiate all the three *Dosha*.

Intake of excessive oily and Guru Ahara causes diminution of Agni and indigestion. Unwholesome food, excessive consumptions of cold drinks, red meat, red chilli, hot spices, junk foods, oily foods, tomato, most acidic food etc acts as a triggering factor for psoriasis.<sup>[12]</sup> Body mass index (BMI) and psoriasis are strongly correlated, and weight reduction is suggested in obese patients. White bread, sugar, and rice are instances of foods with a high glycemic index that are quickly absorbed, increasing serum glucose levels and correspondingly elevating insulin levels. Insulin and IGF-1 have been demonstrated to promote factors such as sebum production, adrenal androgen synthesis, and androgen bioavailability which constitute factors in the pathophysiology of acne.[13]

*Madya* or over consumption of alcohol has been stated as an important etiological factor in development of skin disease. Alcohol can alter the lipid composition of the epidermal barrier because it has an influence on the metabolism of lipids like triglycerides and cholesterol. It could be a component that both initiates and augments inflammation. It can influence both innate and adaptive immunity. Previous research has revealed that alcohol might increase the production of proinflammatory cytokines, such as tumour necrosis factor (TNF), from peripheral blood monocytes and macrophages, as well as the proliferation and activation of lymphocytes.<sup>[14]</sup>

Overindulgence in *Matsya* brings about *Bahudoshakara*. Intake of meat of *Anupa* and *Auodaka* animals causes diminished *Agni* due to *Guru*, *Snidgha*,<sup>[15]</sup> *Picchila*, *Abhishyandi Guna*. *Pisthanna* develops *Guruta* in the body thereby hampering

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various functions in the body. Excessive intake of *Tila does Pitta-Prakopaka* which further results in aggravating *Kushtha*. Over-consumption of *Guda* results in *Krimikara, Medakara, Agnimadyakara* and *Kaphakara*. New grains are *Kledakara* in nature and does *Vistambha* and *Abhishyandi*. Long term intake of *Dadhi* is said to be *Maha-Abhishyandi*, increases *Kapha* and also aggravates *Kushtha*.

#### Action of Pathya

The importance of *Pathya* (wholesome) in *Ayurveda* can be deduced from the fact that *Charak* had stated *Pathya* as a synonym for treatment.<sup>[16]</sup> Diseases can be cured by following only *Pathya* without taking any medicine but if the person not following *Pathya* will not be cured instead taking hundreds of medicaments.<sup>[17]</sup> The importance of diet can be understood with the fact that it has been called as *Mahabhaishajya* in the *Kashyapa Samhita*.<sup>[18]</sup>

Recent research has found a significant link between food and a variety of dermatological diseases. *Pathya* being the most fundamental is a crucial principle of Ayurveda. It tends to be effective and must be put into practice clinically in the contemporary world.

Intake of Laghu Anna has been beneficial in Kushtha. Some research found that low-energy diets and fasting periods reduced psoriasis symptoms. All of these diets alter the metabolism of polyunsaturated fatty acids and affect the eicosanoid profile, which decrease inflammatory processes. Some patients with psoriasis have increased gluten sensitivity. A gluten-free diet has been shown to relieve symptoms in people with IgA and/or IgG antigliadin antibodies.<sup>[19]</sup> The main factor is presumably a lack of intake of arachidonic acid (AA), which lowers leukotriene (LT) B4 production. Fasting results in a decrease in CD4+ T-cell activation and an increase in anti-inflammatory cytokines such interleukin (IL)-4.<sup>[20]</sup> Another possibility could be that calorie restriction reduces oxidative stress, which appears to be linked to psoriasis.<sup>[21,22]</sup>

According to the findings of a randomised trial involving 60 obese patients with psoriasis, those in the intervention group, who were assigned to a low-calorie diet, lost 15 kg more than the controls and also had a greater mean reduction in their PASI than controls (mean PASI reduction -2.3; p = 0.06).<sup>[23]</sup>

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The role of *Tikta Dravya* and *Shaka* has been highlighted in *Kushtha Chikitsa*. the food rich in bitter taste increases gut metabolism even when they cause *Aruchi* in itself. Due to its *Shodhana, Lekhana* action, *Laghu Guna,* it clears microchannels thereby preventing accumulations of toxins. It is *Vishghna* in nature, prevents *Kushtha* and brings stability in skin tissues. Following oral ingestion or direct luminal administration, the presence of bitter chemicals in the GI lumen triggers a series of intracellular processes that culminate with the production numerous gut hormones. A range of bitter substances appear to have potent stimulatory effects, particularly on CCK (Cholecystokinin) and GLP-1(Glucagon-like peptide-1), as well as ghrelin, in the models used.<sup>[24]</sup>

It was discovered that psoriasis patients' symptoms improved while they were following a vegetarian or vegan diet. This recovery was related to neutrophil activity returning to normal, which was extrapolated from lactoferrin levels in the serum. In comparison to omnivorous diets, vegetarian diets have been demonstrated to be related with higher antiinflammatory to proinflammatory adipokine ratios, lower proinflammatory gene expression in the gut microbiota, and lower IgE expression levels. The advantages of a vegetarian diet have also been linked to the high potassium intake, which the body uses to make cortisol, a medication frequently used to treat psoriasis.<sup>[25]</sup>

In one randomised experiment, a Mediterranean-style diet was administered to the intervention group. Improvements in endothelial function scores, as well as lower serum concentrations of C-reactive protein and interleukin (IL-18), were linked to this. A diet high in fruits and vegetables, whole grains over processed grains, and omega-3 fatty acids over omega-6 fatty acids is now highly recommended by many doctors because it has been demonstrated that specific dietary habits can lower markers of vascular inflammation.<sup>[26]</sup>

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# **CONCLUSION**

A proper role of *Ahara* can play a miraculous role in a better quality of life and disease prevention. In the past, *Ahara* as a kind of dermatological therapy have received insufficient attention. However, recent studies have discovered a strong link between various dermatological conditions and food. As with CVD and other systemic diseases linked to psoriasis or the use of systemic steroids, diet may also play a significant role in the prevention of associated systemic disorders.

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