



PSORIASIS IN CHILDREN: AN AYURVEDIC AND MODERN REVIEW ARTICLE

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ABSTRACT- In today's era due to change in lifestyle, lack of physical exercise, alter food habits, pollution, chemical exposure etc., number of skin disease increased markedly, Psoriasis is one of them. Psoriasis is an autoimmune non-infectious, chronic, inflammatory skin disorder where altered keratinization of epidermal cells takes place with well-defined erythematous lesion and silvery plaques with commonly found on the extensor surface and scalp and a chronic fluctuating course.¹ In *Ayurveda* skin disorders are described under a broad term *Kustha*, "*KushnatiitiKustha*"² means that which makes one's skin look scandalous or ugly or which destroys *twak* and other *dhatu*s is called *Kustha*. For the management of Psoriasis modern medicine science uses coal-tar, PUVA (Psoralen and ultraviolet A), corticosteroids and anti-mitotic drug and it has serious systemic side effects like liver, kidney failure, bone marrow depletion etc. Thus, our duty to establish a safer and effective line of treatment for human welfare through *Ayurveda* which provide long lasting effects, results and better life to patient through its uniqueness in the management of Psoriasis.

INTRODUCTION-

Psoriasis is common, chronic, disfiguring, inflammatory and proliferative condition of skin in which both genetic and environmental influence have a critical role. According to study it is found that patients who perceive stress as a causal factor for exacerbation of their disease (psoriasis) seem to have a more vulnerable psychological constitution. When the onset occurring during childhood about 50% have positive family history of the disease and girls are more frequently affected. Prevalence in different population varies from 0% to 11.8%. For most of the range extend from around 0.5% to close to 2.5%.³

Pediatric psoriasis consists broadly of 3 age groups of psoriatic patients: infantile psoriasis, a self-limiting disease of infancy, psoriasis with early onset, and pediatric psoriasis with psoriatic arthritis. About one quarter of psoriasis cases begin before the age of 18 years.⁴ The mode of transmission is unknown; a multifactorial type of inheritance has been proposed. There is an association with histocompatibility antigens (HLA).⁵ However, there are many triggering factors such as increased stress, sedentary life style, genetic factor, physical trauma in the form of scratches, surgical incisions or injuries, infections and some drugs also. The most frequently affected sites are the scalp, tips of fingers and toes, palms, soles, umbilicus, gluteus, under the breasts and genitals, elbows, knees, skin etc.

Ayurvedic correlation of Psoriasis –

According to sign and symptoms of psoriasis we can correlate it with *Kitibha kushtha*. *Kitibha* is one of the *kshudra kushtha* having the *lakshanas* like *Shyava*, *Kina*, *Kharasparsha*, *parusha*, *rukshapidika* and *kandu*.⁶ It manifests due to vitiation of *Sapta dhatus* like three *doshas*, *twak*, *rakta*, *mamsa* and *lasika*.⁷ *Kitibha kushtha* is having involvement of *Vata* and *Kapha dosha*⁸ having the *Lakshanas* of individual *Doshas* management with *Shaman* and *Shodhana chikitsa*.

Table no. 1.1 Sign and symptoms- (According to different texts)

	<i>Charak</i> ⁹	<i>Shushrut</i> ¹⁰	<i>Vagbhat</i> ¹¹
Sign and symptoms	<i>Shyavm</i> <i>Kina</i> <i>Kharasparsha</i> <i>Parusha</i>	<i>Stravi</i> <i>Vritam</i> <i>Ghana</i> <i>Ugrakandu</i> <i>Snigdha</i> <i>Krishnam</i>	<i>Ruksham</i> <i>Kina</i> <i>Kharasparsha</i> <i>Kandu</i> <i>Parusha</i> <i>Sitam</i>

Table no.1.2 Comparison between Psoriasis and *Kitibhakushta*¹²

S.N.	<i>Kitibhakushta</i>	Psoriasis
1.	<i>Shyava /snigdha Krishna varna</i>	Erythematous lesion turns too black in chronic cases
2.	<i>Kharatvam</i>	Candle grease sign – Positive
3.	<i>Parushatvam</i>	Abnormal hardening seen in chronic cases
4.	<i>Rukshatvam</i>	Scales are rough to touch
5.	<i>Ugrakhandu</i>	Severe itching

References of Kushtha from different literatures

- *Kushtha* has been plaguing mankind from ancient times. *Maharshi Vedvyas* has stated in the great epic *Mahabharat* that one *Maharshi* called '*Devapi*' suffered from *Kushtha*.
- In *Buddhist Literature (Heenyan)* so many skin disorders are describe.¹³
- *Kitibha kushtha* is mentioned in various *Samhitas*. *Acharya Charak* has mentioned about the types, root causes, premonitory symptoms, main sign and symptoms, pathophysiology, treatment and complications of *kushtha* in very detail.
- In other *smhitas* like *Shushrut, Vagbhatt, Madhavnidanam* etc. there is also wide description on it.

TYPES OF PSORIASIS-

Plaque Psoriasis (Psoriasis vulgaris): It is the most common form of psoriasis. It affects majority of people with psoriasis. Plaque psoriasis typically appears as raised areas of reddened skin covered with silvery white scaly skin. These areas are called plaques¹⁴



Figure no. 1.1 showing the picture of plaque Psoriasis

Pustular Psoriasis: It appears as raised bumps that are filled with non- infectious pus (pustules). The skin under and nearby pustules is red and tender. Pustular psoriasis can be seen in localized, commonly to the hands and feet, or generalized with widespread patches occurring randomly on any part of the body¹⁵⁽⁶⁻⁵⁾



Figure no. 1.2 showing the picture of Pustular Psoriasis

Nail Psoriasis- Produce a variety of changes in the appearance of finger and toe nails. These types of changes include discoloration under the nail plate, pitting of the nails, thickening of the skin under the nail, loosening (onycholysis) and crumbling of the nail ^{16[5,7]}.



Figure no. 1.3 showing the picture of Nail Psoriasis

Guttate Psoriasis- It is characterized by copious small oval (teardrop- shaped) spots. They appear over large areas of the body, such as the trunk, limbs, and scalp. Guttate psoriasis is associated with streptococcal throat infection¹⁷ [8,5].



Figure no. 1.4 showing the picture of Guttate Psoriasis

Flexural Psoriasis (Inverse Psoriasis)- It appears as smooth inflamed patches of skin. It is found in skin folds, mainly between the thigh and groin, the armpits, under an overweight stomach (pannus), and below the breasts (infra-mammary fold)¹⁸ [5,9].

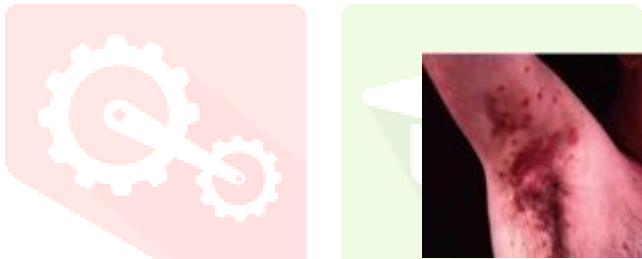


Figure no. 1.5 showing the picture of Flexural Psoriasis

Erythrodermic Psoriasis- It involves the extensive inflammation and exfoliation of the skin over most of the body surface and may be accompanied by severe itching, swelling and pain. It is often the result of an exacerbation of unstable plaque psoriasis, particularly after the abrupt withdrawal of systemic treatment. This type of psoriasis may be fatal, because more rigorous inflammation and exfoliation disturb the body's ability to regulate temperature and for the skin to perform barrier functions¹⁹ [5,10].



Figure no. 1.6 showing the picture of Erythrodermic Psoriasis

PATHOPHYIOLOGY-

Psoriasis is a hyperproliferative skin disease with increased rate of epidermal turnover. The pathogenesis of psoriasis is linked to various cellular mechanism and the role of T cells, antigen presenting cells (APCs), keratinocytes, Langerhans cell, macrophages, natural killer cells, an array of Th1-type cytokines, as well as certain growth factors like vascular endothelial growth factor (VEGF), keratinocytes growth factor (KGF), etc., have been suggested to play a key role in the pathogenesis of psoriasis.²⁰

Psoriasis is an immune mediated disease; the activation of T lymphocytes leads to the inflammation in the dermal component and secondary to the inflammatory events there is also that epidermal hyperproliferation.²¹

TREATMENT- In contemporary science; Topical therapies, including corticosteroids and calcipotriene, are the therapies of choice in the initial care of pediatric patient. Ultraviolet light, acitretin and cyclosporine can clear skin symptoms, while methotrexate and etanercept can clear both cutaneous and joint disease. Concern for psychological development is required when choosing psoriatic therapies.

Available treatment in Ayurveda: Ayurvedic management of psoriasis includes diet management (*Aahar*), lifestyle management (*Vihar*), *Shodhan* therapies, *Shaman* therapies and counseling.

Multiple *Shodhana* therapies:

For complete relief purification *Shodhan* procedures are indicated. The *Shodhan karma* involves the complex and stepwise measures of *Purvakarma* (Preparatory procedure), *Pradhankarma* (Main Procedure), and *Paschatkarma* (after procedure). *Purvakarma* includes (1) *Dipana* (digestive juice stimulants), (2) *Pachana* (digestants), (3) *Snehana* (oleation), and (4) *Swedana* (sudation). *Pradhan karma* include *Panchakarma* therapy and *Paschat karma* include *Sansarjan karma*. For all the skin diseases it is advised to perform emesis at every fortnight, purgation on every month, snuffing on everythird day and bloodletting at every six months. It is also said to decide the *Panchakarma* procedure based on the vitiated *dosha*.²²

Management according to involved *Dosha*²³

- Patient suffering from *Kustha* dominated by *Vata* should be treated with medicated ghee internally like *Tikta shatpal ghrit*²⁴, *Mahatikta ghrit*²⁵, *Mahakhadir ghrit*²⁶ etc.
- Patient suffering from *Kustha* dominated by *Kapha*, should be administered *Vamana* – emetic therapy with the help of drugs like *kutaj*, *madanfala*, *mulethi*, *patol*, *nimbpatra*²⁷
- Patient suffering from *Kustha* dominated by pitta is given *Virechana* – purgation therapy with the help of drugs like *Trivarta*, *Danti*, *Triphala* etc.²⁸

Kushta patient with more vitiated *Doshas* (*Bahudosh*) is given multiple *Shodhana* therapies for several times, with a lot of care. Excessive expulsion of *Doshas* (morbid factors) might weaken the patient and the aggravated *Vata* might endanger patient's life instantaneously.

Because *Vayu* gets aggravated and the patient becomes weak soon after the elimination therapies which condition will be remedied by the administration of the *Snehapana* – oleation therapy.²⁹

Shaman chikitsa for Kushta– Palliative measures for cure of different types of *Kushta*, are categorized on the basis of aggravation of *Doshas*.

Therapies for the cure of *Kushta* in general are³⁰-

- Intake of *Rasanjana* (solid extract prepared of the decoction of *Daruharidra*) along cow urine cures *Kushta*, intake of *Abhaya* along with *Trikatu* (Ginger, pepper and long pepper), *Guda* (Jaggery) and sesame oil for 1-month cures *Kushta*. *Patolamuladi Kashaya*, *Mustadi Churna*, *Triphaladi Churna*, *Madhvasava*, *Kanakabindvarista*, *Triphalasava* are useful in treatment of *kushta*.
- Use of Sulphur: Administration of *Lelitaka* (Sulphur) with the juice of *Amalaki* together with honey is the remedy par excellence for the cure of 17 types of *Kushta*.
- Similarly, is the therapeutic efficacy of *Makshika Dhatu* (copper pyrite) taken together with Cow's urine.
- Use of Mercury: If *Rasa* (mercury) is processed by adding sulphur or *Svarnamakshika* (copper Pyrite), would be a remedy par excellence for curing all ailments. Similarly, Mercury processed with *bhasm* of Diamond and *Shilajatu*, or *Yogaraja* cures all ailment.

Meditation- As stress is a potential trigger for psoriasis flares, one way a person can keep these in balance is through reducing stress and anxiety. Meditation and the practice of “Pranayama” a method of controlled breathing techniques, benefit a person in reducing their psoriasis. It improves a sense of well-being so it's easier to handle social challenges like the stigma that often accompanies psoriasis. It reduces the need to alleviate stress in other ways like unhealthy eating, so it's easier to follow a diet that supports psoriasis management. So mindfulness techniques could benefit an individual's overall well-being.

There are some ayurvedic studies that shows significant result in Psoriasis. Some ayurvedic yogas like *Panchtikrit grit*³¹, *tuvaraka tail*³², *Somraji churn evm Somraji tail*³³, *Siddhartak snanokt Dravyas*³⁴, *Aragwadha part lepa* with *Shaman yoga Lelitika (Gandhak)* found effective in treatment of Psoriasis.

DISCUSSION- Ayurvedic therapy of psoriasis includes Diet, lifestyle and stress management, *Shodhan* therapies, *Shaman* therapies along with counseling. *Shodhan* therapy includes *Panchakarma* procedures, especially *Vamana* [i.e., therapeutic vomiting] and *Virechana* [i.e., purgation]. Psoriasis management mainly includes counseling, yoga and meditation techniques for stress management, use of immunomodulators to regularize the immune response, topical applications to minimize the skin scars,

and internal medications to minimize the disease complications and to prevent the recurrence of the disease. It is important to maintain a healthy lifestyle in order to adapt to this condition.

Probable Mode of Action:

- *Kitibha Kustha* is a type of *Kshudra Kustha* with *Vata-Kapha dosha* predominant and it is also *Raktapradoshaja vikara* mentioned by Acharya Charaka. Also, in *Kushtha Tvak, Rakta, Mamsa* and *Lasika Dushya* are involved.
- In *Ayurveda* for the treatment of *Kitibha Kustha* usually runs a chronic course of *Shodhan* therapy along with *Purvakarma* and *Paschata karma*.
- *Purvakarma* like *Dipana Pachana (Chitrakadivati, Trikatuchurna)* are mainly *Amadoshanashaka & agnivardhaka*.³⁵ *Snehapana* is *Vatashamaka, dahashamaka*, decreases scaling & dryness.³⁶ *Snehana* is intended to produce *Dosha Utklesha* (quantitative increase) at the level of *Dhatu*. *Sarvangasweda* decreases obstruction & increases *swedana (Srotashodhaka)*.³⁷ It is meant to bring the *Utklishta Doshas* to *Koshtha* from where it is amenable to expulsion via natural orifices.
- *Vamana* expels *Kapha* from the *Koshtha* which is the chief *Dosha* in *Kitibha Kustha*. Mainly It is *Kapha dosha-nashaka* and increases *Agni*.³⁸
- *Virechana* expels *Pitta dosha* from the *Koshtha* and it also suppress *Vata & Kapha dosha*.³⁹ According to Acharya Charaka *virechana* does the purification of all the channels, also does the purification and maintain the proper functioning of all the sensory organs, initiate the *agni* (Digestive fire) which directly improves the criteria's like quality of life, Self-efficacy, stress etc.⁴⁰ As the main focus is on the Holistic so, *virechan karm* also has effect on the *buddhi, indriya, satva* etc.⁴¹
- As *Kitibha Kustha* is also *Raktapradoshajavikara* along with association of *pitta* mentioned by Acharya Sushruta. So *Raktmokashana* is able to do *pittashamana* and can be used in *Raktaprasada* disease.
- Acharyas explain about *Tikta Rasa* as, it is *Kushtha Shamaka, Tvak & Mamsa Sthirakar* and *Kleda* and *Lasika Shoshaka*. So it helps in *Samprapati Vighatana* in *Kitibha Kustha*.

Example of some drugs are indicated in –

Table no. 2 Drugs effective in Kustha

DRUGS COMPOSITION	EFFECT
<i>Gandhakrasayan</i>	acts as <i>Kushtaghna, Kandughna, Dahaprashaman, Raktashodhak, Vranaropak, Twachya, Krumighna</i> . It is mainly indicated in <i>Kushtaroga</i> . It possess the property like antibacterial, antiviral and antimicrobial. ⁴²
<i>ArogyavardhaniVati</i>	is a very useful formulation in treating skin diseases like- <i>kushta, Amadoshanashak, Vata And Kapha-nashaka, Grahani-shodhak</i> also have an good effect on normal functioning of liver. ⁴³
<i>Kaishor Guggulu</i>	acts as blood purifier, anti-inflammatory & anti-bacterial ⁴⁴
<i>Mahamanjisthakvatha</i>	<i>Vata-rakta, Kustha, Upadamsa, SlipadaRoga</i> by its anti-inflammatory and antimicrobial property. ⁴⁵
<i>Khadirarista-</i>	<i>Khadira</i> is itself mention as “ <i>Kushthgna</i> ” in <i>Charka Samhita</i> ⁴⁶
<i>Guduchi ghril</i>	acts as <i>Vata-Kaphahara</i> as well as <i>Raktadoshghna</i> ⁴⁷
<i>Nimb Tail's</i>	active ingredients are – <i>Nimbatail, Tuvaraka Tail, Karpura</i> and act on following <i>Rogas - Tvakroga, Vrana, Kustha, Kandu-nashaka</i> . By its antibacterial, anti-septic property. ⁴⁸

CONCLUSION –

Ayurvedic medicine is oriented toward prevention, health maintenance and treatment of diseases. The principles of treatment of skin disorders in *Ayurveda* include purification procedures such as *Vamana* and *Virechana*, internal medications, and external applications. There is large number of drugs of herbal and mineral origin mentioned in *Ayurvedic* texts, regarding the treatment of *Kitibha*. All of these act as *smprapti vighatan* which is the main treatment of *Ayurveda*

Hence, it can be concluded that the *Ayurvedic* line of management can effectively modify the disease process in psoriasis. Furthermore, the absence of any side effects of therapy, in the long run, makes patients tolerate treatment and have better compliance. And also with the help of mindful techniques we can fast the improvement rate.

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⁴⁶Bhaisajyaratnavali, of Kaviraj Govind Das Sen, Hindi commentary by, prof. Siddhi Nandan Mishra, 1st edition / ChaukhambaSurbhahartiPrakashana, kushtarogadhikar, 54, 867

⁴⁷Haisajyaratnavali, of Kaviraj Govind Das Sen, Hindi commentary by, prof. Siddhi Nandan Mishra, 1st edition / ChaukhambaSurbhahartiPrakashana, kushtarogadhikar, 54, 895.

⁴⁸Bhaisajyaratnavali, of Kaviraj Govind Das Sen, Hindi commentary by, prof. Siddhi Nandan Mishra, 1st edition / ChaukhambaSurbhahartiPrakashana, vataraktaadhikar, 27, 584.

