



AYURVEDIC MANAGEMENT OF ICHTHYOSIS VULGARIS -A SINGLE CASE REPORT

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ABSTRACT

Ichthyosis is a rare condition characterized by hyperpigmented, hyperkeratinized, dry and scaly skin lesions. The signs and symptoms of inherited ichthyosis typically manifest at birth or during the first year of life. In Ayurveda, this condition can be referred to as *Adibalapravrut* (~hereditary anomalies)/*Janmabalapravrut* (~congenital anomalies) *Vyadhi* (~disease/syndrome). This suggests that the *Vyadhi* is challenging to remedy or incurable. In this case, we can determine whether the patient experienced satisfactory relief after reaching 20 years of age through Ayurvedic treatment. This would suggest that the chosen approach was effective for their condition at that stage. A 21-year-old female patient presented with hyperkeratinized and hyperpigmented lesions with deep cracks, predominantly affecting her extremities, back, and abdomen. These symptoms had been present since birth but had progressively worsened over the years. Despite seeking medical attention at a nearby allopathic hospital and taking allopathic medication, the patient experienced no relief from her symptoms. Consequently, she decided to explore Ayurvedic medicine and sought treatment at our hospital. The hereditary nature of ichthyosis presents a challenging aspect for its treatment due to its genetic basis. The successful treatment of ichthyosis through Ayurveda after two decades of the patient's life underscores the importance of exploring alternative therapeutic approaches beyond conventional medical practices.

KEYWORDS: Ayurveda, Ichthyosis Vulgaris, *Panchakarma* (~five internal bio-cleansing therapies)

INTRODUCTION

Inherited ichthyoses are a group of genetic disorders characterized by generalized dry skin, scaling and hyperkeratosis, and often associated with erythroderma. These manifestations are due to mutations in genes mostly involved in skin barrier formation. Inherited ichthyoses consist of non-syndromic ichthyoses and ichthyosis syndromes. Non-syndromic ichthyoses include ichthyosis vulgaris, recessive X-linked ichthyosis, autosomal recessive congenital ichthyosis, keratinopathic ichthyosis and other forms. Ichthyosis vulgaris is a common, inherited skin disorder caused by a Filaggrin gene mutation leading to dry skin scaly patches, and other symptoms, usually appearing in infancy and becoming evident by age 5.^[1,2] Recent advances in understanding ichthyosis pathophysiology, along with emerging therapies like protein replacement and gene therapy, offer hope for patients with inherited skin diseases, with ongoing trials and case series suggesting effectiveness, especially in Netherton syndrome and autosomal recessive congenital ichthyosis.^[3] Many of these therapies are prohibitively

expensive and out of reach for middle-class individuals, whereas, Ayurveda offers more economical alternatives, such as *Samsodhan* (~major purification therapy) and *Samsaman* (~palliative procedure). One of the reasons for conducting this study is the insufficient amount of research available on this disease in Ayurveda.

Ichthyosis vulgaris is the most common type of ichthyosis, affecting 1 in 100 to 250 people. It is a milder form in heterozygotes and usually appears during the first year of life or early childhood. It accounts for over 95% of all ichthyosis cases and tends to improve with age. Prevalence is similar across sexes and ethnicities.^[4]

Patient information

On July 25, 2022, a 21-year-old female student patient presented to our hospital with a complaint of hyperkeratinized and hyperpigmented lesions predominantly affecting all of her extremities since birth. According to the history provided by her mother, after birth, she exhibited mild dryness of the skin on her entire body. Over time, she began to experience worsening

symptoms of *Tvak-rukshatvam* (~dryness of skin) and scaling. There were genetic predisposing factors, potentially linked to her family history, as her elder sister had a confirmed case of ichthyosis. As she started growing up, she and her parents became aware of her condition, prompting them to consult a dermatologist. She received oral medications and local applications for her condition during this time. After visiting numerous hospitals one after another, during which dermatologists had initially declared that recovery was unlikely, they eventually learned about our hospital and decided to bring the patient here. She was grappling with feelings of psychological unease stemming from her atypical skin discoloration, which in turn was undermining her self-assurance in her academic pursuits.





fig-2_C after treatment mild hyperpigmented skin on both legs



fig 3-A -before treatment severe scale and dry skin on abdomen



fig-3 B after treatment moderate -dryness absent-scaling



fig-4_A-absence of perspiration



fig:4-B after treatment-perspiration started

Clinical findings

General examination

The patient presented with hyperkeratinized skin lesions distributed across the abdomen, bilateral palms, elbows, and soles, dorsal aspects of all extremities, bilateral knees, and gluteal regions. The lesions exhibited greater severity on the palms and soles, manifesting as deep cracks. Additionally, hyperpigmentation was observed on the bilateral knees, elbows, and back. Mild hyperkeratinization was noted in the bilateral axillae, while the central lesion of the left axilla displayed hypopigmentation. The patient also reported irregular menstrual cycles and an absence of perspiration. Despite undergoing various allopathic treatments from multiple general physicians and dermatologists over time, the patient experienced no improvement. After being informed about her medical condition, she was advised that Ayurvedic treatment would be necessary over an extended duration. The patient was treated with *Panchakarma* procedures *Virechan Karma* (~therapeutic purgation) and *Niruha Basti* (~therapeutic decoction enema) followed by oral medicaments (*Manjisthadi Kwath*, *Kaishore Guggulu*, *Rasamanikya*) and the local application of the *Jatyadi tail*. There was no sensory loss on any body parts other than areas with hyperkeratinization.

Family history

She had two other siblings. Among them, her elder sister had a positive history of ichthyosis and her brother was healthy.

Investigation

The patient did not undergo any investigations; the only clinical diagnosis made by the previous doctor was based on symptoms of hyperpigmentation, dryness, and hyperkeratinization over various body parts.

Timeline

The timeline is given in bellow Table no 1.

Table no. 1: Timeline of events for case.

Years	Events	Intervention
June, 1999	She born with mild hyperpigmented and dry skin on bilateral limbs	At the initial stage, her parents ignored the condition
December, 1999	Mild hyperpigmented and dry skin on bilateral limbs	After 7 months on 5 th December 1999, they consulted a general physician, the diagnosis was made on the basis of symptoms, She was treated with a local application and advised to consult a dermatologist
May, 2009	As she grew up, the dryness, hyperkeratinization, and hyperpigmentation increased in the back and limbs.	Upon consulting a dermatologist, oral medication and topical ointment were prescribed to treat her condition. The ointment was used diligently for a span of 2-3 years.
April, 2016	She increased the symptoms of hyper keratinized, dryness, and hyperpigmentation with scaling on her both limbs, back & abdomen	Her parents changed doctors and medications frequently. She took oral medication and ointment irregularly until 2017.
July, 2022	Increased all above-mentioned symptoms with no perspiration and no hair roots on extremities	This year, she decided to seek Ayurvedic treatment at our hospital instead of using the allopathic ointment.

Table no. 2: Therapeutic intervention.

Sr no.	Sodhan chikitsa	
	Procedure	Drug
1	<i>Snehapan</i>	<i>panchtiktaghrit</i> 40 ml 2 times /day up to 100 ml
2	<i>Sarvang abhyan</i>	<i>jatyadi tail</i>
3	<i>Sarvang baspa swedana</i>	<i>Nimba patren</i>
4	<i>Virechan karma</i>	<i>Errand sneha- 50 ml+Dindayal churna- gm</i>
5	<i>Samsarjan kram</i>	-
6	<i>Niruha basti- pathyadi kustha-320 ml</i>	Daily after <i>samsarjan kram</i> in the afternoon before lunch
Sr no.	Saman chikitsa	
	Medicine	Matra and Anupan
1	<i>Manjisthadi kwath</i>	40 ml/2 time with water
2	<i>Lelital makshik</i>	2tablet 2 times with water (300mg/tablet)
3	<i>Kaishor guggulu</i>	2 tablet 2 time with water (300mg/tablet)
4	<i>Amalaki rasyan</i>	3 gm / 2timewith water
5	<i>Panchtikta ghrita-samnarth</i>	20 ml /2 times with <i>kwathen</i>
6	<i>Jatyadi tail</i>	For local application
7	<i>Bala tail</i>	For local application
8	<i>rasamanikya</i>	20 mg 2 time with water

Table no. 3: Follow up and outcomes.

Symptoms with affected body parts	Before treatment	After sodhan chikitsa	After treatment
Hyper keratinized on B/L limbs, stomach, and back region	Severe (see Fig. 1-A)	Moderate (see Fig. 1-B)	Mild (see Fig. 1-C)
Hyperpigmented on B/L limbs, stomach, and back region	Severe (see Fig. 2-A)	Moderate (see Fig. 2-B)	Mild (see Fig. 2-C)
Skin- scaly and dry	Scaly-Severe Dryness -severe (see Fig. 3-A)	Scaly-moderate Dryness-severe	Scaly-Absent Dryness-moderate (see Fig. 3-B)
Lack of perspiration	Absence of perspiration (see Fig. 4-A)	Absence of perspiration	Perspiration started (see Fig. 4-B)
Invisible Hair roots on B/L limbs	No hair follicles are visible	No hair follicles are visible	hair follicles are started visible on hands
Irregular periods	Menstrual cycle -45 days	Menstrual cycle – 38 days	Menstrual cycle-25 days
Mood	unhappy, apathy	Unhappy, apathy	Happy

Diagnostic assessment

The patient's signs and symptoms were thoroughly evaluated, and the diagnosis of Ichthyosis was established. Symptomatic assessments were conducted both upon admission and after discharge. A comprehensive personal and family history was obtained, revealing the patient's unsatisfactory bowel movements despite their intact digestive power. Her skin exhibited characteristics such as *Paripotanam* (~peeling or scaling of skin), *Atikarsparsah* (~excessive roughness of skin), *Tvak-rukshatvam* (~dryness of skin), *Tvakparushyam* (~hardness/roughness of skin), *Tvak-sputanam* (~cracking of skin), and *Krushnatvak* (~blackish discoloration of skin).

Therapeutic interventions

During the patient's two-month hospitalization, a comprehensive treatment plan was implemented, consisting of both *Sodhan Chikitsa* and *Saman Chikitsa* therapies. The *Sodhan Chikitsa* regimen encompassed *Snehapan*, *Virechan*, *Abhyanga*, *Swedana*, *Basti*, and *Raktamokshan* procedures, while the *Saman Chikitsa* approach involved the administration of medications such as *Manjisthadi Kwath*, *Kaishor Guggulu*, *Rasamanikya*, *Lelitaka Makshik*, and *Amalki Rasayan*. Additionally, for localized treatment, *Jatyadi Tail* and *Bala Tail* were applied. Detailed information regarding the treatment schedule, duration, and dosage can be found in Table No. 2 for reference.

Follow-up and outcome

The patient underwent a two-month admission period during which detailed symptomatic observations were diligently documented. These observations encompassed notable symptoms such as hyperkeratinization, dryness, and scaling. These assessments were meticulously conducted at various stages, including upon admission, following *Sodhan Chikitsa* and at the time of discharge. The recorded findings have been thoughtfully compiled in Table 3, offering invaluable insights into the patient's overall condition.

DISCUSSION

According to Ayurveda, *Adibalapravrut/Janmabalapravrut vyadhi* is hard to cure or untreatable. All skin diseases could be taken under one title "*Kustha* (~various skin diseases)". *Ek-kustha* is the one type of *kshaudra* (~mild) *kustha*. Based on the symptoms, ichthyosis can correspond with *Ek-kustha*. *Acharya Charak* mentioned 7 types of *Maha-Kushta* (~various skin diseases) and 11 types of *Kshudra Kushta*^[5] and *Sushrutacharya* restated it. *Acharya Sushrut* mentioned the inheritance of skin disorders due to defective formation of the ovum and sperm in the *nidansthan*.^[6]

In order to accurately diagnose and effectively treat rare diseases in Ayurveda, a thorough comprehension of the *dosha* (~regulatory functional factors of the body), *dushya* (~which gets vitiated), and *vikriti* (~abnormal) is

essential. *Ek-kustha* is the predominance of *vata* (~dosa responsible for movement and cognition) and *Kapha* (~dosa responsible for regulating body fluids and keeping the body constitutive cohesive) *dosa*.^[7] So here, we used *vata-kapha samsaman aushdhi*. Here patient was treated with *manjisthadi kwath*, which was given orally. The ingredients of *Manjisthadi Kwatha* are *Manjistha*, *Haritaki*, *Vibhitaki*, *Amalaki*, *Nimba*, etc., which have properties like *Agnidipaka Raktashodaka*, *Pitta Kaphahara*, *Kustaghna*, *Kashaya*.^[8] Numerous studies have been conducted on *manjisthadi kwath*, and according to one of them, it has been proven to act as an antimicrobial agent.^[9]

Kaishore guugulu is given after *virechan karma*. In this herbal medication, Anti-allergic, antibacterial, and blood-purifying properties are found.^[10] *Jatyadi tail* was given daily for local application. The three main elements in the *Jatyadi tail* are *Ropaka*, *Vedanasthapana*, and *Shothahara*.^[11] Ingredients with antibacterial properties include *neem*, *Haridra*, *daruharidra*, *abhaya*, and *lodhra*. Ingredients like *Manjistha*, *Sariva*, and *Karanja* have *vrunashodhana* (wound cleansing) properties. The antioxidant and wound-healing capabilities of *Naktahva* and *Abhaya*. *Katuka* enhances re-epithelialization, neo-vascularization, fibroblast, dermal myofibroblast, and endothelial cell migration into the wound bed. The *vrunaropana* (Wound healing) effect of *Jati*, *Patola*, and *Sikta Kushta* acts as an anti-inflammatory. When applied topically, *madhuka* has a calming and healing effect on skin blemishes.

CONCLUSION

In Ayurveda, while some diseases are classified as *Asadhya* (~incurable disease) or *Kastasadhya* (~difficult to cure), it has been observed that Panchakarma therapy and *Samsaman Aushadhi* provide satisfactory results in treating these conditions.

Declaration of patient consent

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Conflict of interest

No conflict has been reported.

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