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Ayurvedic management of *Shwitra* (Vitiligo) with special reference to *Twak Sharir* - A Case Study

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ABSTRACT

Introduction: In Ayurveda, 'Twacha' or 'Charma' refers to the skin, and skin-related disorders fall under the broad category of 'Kushtha.' Among these conditions, 'Shwitra' stands out, marked by whitish discolorations on the skin. *Shwitra's* origins lie in the intricate interplay of seven essential bodily constituents, known as *Sapta Dravyas*: Vata, Pitta, Kapha, Rasa, Rakta, Mamsa, and Meda. Remarkably, *Shwitra* primarily manifests its enigmatic presence within the innermost stratum of the skin, known as 'Tamra.' This inner sanctum of the epidermis is held in high regard as the principal locus of *Shwitra's* affliction. It bears an intriguing resemblance to the more widely recognized condition known as Vitiligo, a dermatological anomaly characterized by hypopigmentation. This puzzling condition, Vitiligo, afflicts approximately 1% of the global population, adding a layer of complexity to our understanding of the intricate workings of the human integumentary system. **Methodology:** In this clinical case, a 43-year-old male presented with de-pigmented patches in the left buccal region, characterized by mild pruritus but the absence of any burning sensation. The therapeutic approach commenced with the administration of *Shamana Aushadis*, specifically targeted at symptom alleviation. The primary objective was to address the root pathology and facilitate the patient's overall recovery and well-being. **Result:** The patient responded well to *Shamana Aushadis*. Progress was assessed using subjective and objective criteria, employing a comprehensive approach to evaluate the treatment's effectiveness.

Key words: Ayurveda, *Shwitra*, Vitiligo, *Shaman Aushadi*

INTRODUCTION

The skin, body's largest organ, acts as a vital protective shield against external threats while providing a tangible reflection of one's emotional and physiological well-being. This interface between the inner and outer worlds plays a key role in both preserving beauty and

defining individual identity within society. Changes in skin coloration often signal disruptions in the body's equilibrium, influenced by a web of interconnected factors including nutrition, hygiene, circulation, age, immunity, genetics, mental health, and medication usage. Vitiligo, referred to as "*Shwitra*" in Ayurveda, has been described in Vedic literature, employing terms like "*Shweta Kushtha*," "*Kilasa*," "*Palita*," which signify the transformation of normal skin colour into white. Vitiligo is a chronic skin disorder characterized by the absence of melanin pigments, resulting in de-pigmented skin patches with well-defined borders.^[1] Approximately 1% of the global population is affected by Vitiligo, with the highest incidence in India and Mexico. It is estimated to affect 3-4% of the Indian population, and even higher rates, up to 8.8%, have been reported, particularly among dark-skinned individuals.^[2] The aetiology of Vitiligo remains unclear despite its evident multifactorial clinical expression.

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The localized absence of melanocytes leads to the formation of hypopigmented patches, a condition believed to stem from cell-mediated autoimmune melanocyte destruction. Generalized vitiligo typically exhibits symmetric distribution and affects regions such as the hands, wrists, feet, knees, neck, and areas around body openings. In contrast, segmental Vitiligo is confined to a specific body region, albeit not strictly following dermatomal patterns. De-pigmented patches in segmental Vitiligo are characterized by sharp demarcation. Given this context, it becomes imperative to delve into the study of the skin, known as "Twak" in Ayurveda.

Twak Sharira

Formation: According to *Acharya Sushruta*, *Twacha* emerges as a result of the heat generated during the amalgamation of *Shukra* (reproductive tissue) and *Shonita* (blood) during the *Garbhanirmaana Kala*, the phase of embryogenesis.^[3] *Acharya Charaka* posits that *Twacha's* development stems from the conjunction of *Shukra* and *Shonita* and the subsequent formation of all seven *Dhatu* (bodily tissues).^[4] *Acharya Vagbhata* suggests that *Twacha's* development occurs through the maturation (*Paka*) of *Rakta Dhatu* (blood tissue) by the action of *Dhatvagni* (tissue-specific metabolic fire).^[5] *Acharya Charak* posited six skin layers, omitting thickness details. Two layers were named, while the rest were linked to diseases. *Acharya Sushrut* detailed seven skin layers, naming each and specifying thickness and associated diseases. *Acharya Vagbhata* mirrored *Sushrut's* seven layers and emphasized the fourth layer, "*Tamra*," as the origin of all *Kushtha* ailments. Their insights enriched dermatological understanding significantly.

Layers of Skin according to Acharya Charaka

Prathama	Udakadhara - Bahya Twak
Dwitiya	Asrugdhara
Tritiya	Sidhma, Kilasa, Sambhaadhithana
Chaturthi	Dadru, Kustha, Sambhavadhithana
Panchami	Alaji, Vidradhi Sambhavadhithana

Shashthi	Injury - Kampa & Tamodarshana
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Layers of Skin according to Acharya Sushruta

Avabhasini	Sidhma, Padmakantaka
Lohita	Nyachcha
Shweta	Charmadala, Mashaka, Ajagallika
Tamra	Kilasa, Kustha
Vedini	Kustha, Visarpa
Rohini	Grahini, Arbuda, Apachi, Galaganda
Mamsadhara	Bahgandara, Vidradhi

The aforementioned *Acharyas* have meticulously documented the localization of diseases within specific skin layers. However, a discrepancy arises concerning the classification of the "*Shwitra*" affliction. *Acharya Charak* attributes it to the third layer, whereas *Acharya Sushrut* situates it within the fourth layer of the integument.

OBJECTIVE OF STUDY

To assess the effectiveness of *Ayurvedic* therapy for *Shwitra*, as delineated in classical *Ayurvedic* texts.

Brief History of the Subject

A 43-year-old male, presented at the outpatient department (OPD) of Patanjali Ayurved Hospital on June 15, 2023, complaining of a white hypo-pigmented patch on the left side of his face, specifically in the left buccal region. This condition had been persisting for duration of one year. Upon gathering a preliminary medical history, it was discovered that he had been in good health one year ago but had experienced a hyper-pigmented mark in the same facial area. In response, he had applied a depigmentation cream, which subsequently led to the appearance of a small white patch on the left side of his face. Initially, he did not pay much attention to it due to its small size. However, as time passed, he noticed its expansion, prompting him to seek medical intervention from a dermatologist at Banaras Hindu University (BHU). He underwent

treatment for a period of one year, during which the patch exhibited partial resolution. Unfortunately, upon discontinuing the treatment, the hypopigmentation re-emerged, prompting his visit to Patanjali Ayurved Hospital for further and better management.

Past History: No H/O HTN, DM, COPD, Thyroid disorder.

Family History: No family history relevant to the case recorded.

Personal History

- **Occupation** - Doctor Homeopathic
- **Marital Status** - Married
- **Religion** - Hindu
- **Diet** - Vegetarian
- **Appetite** - Good intake
- **Bowel** - Regular
- **Micturition** - Normal
- **Sleep** - Sound
- **Allergies** - Not Any
- **Addictions** - Not Any

Clinical Findings

General Examination

- Built - Medium
- BP - 124/80 mm Hg
- Pulse - 76 b/min
- RR - 18/min

Systemic Examination

- **CNS** - Patient is well oriented and alert to person, place and time. Muscle power, tone and reflexes - Normal
- **CVS** - S1S2 Normal, Murmurs absent, Apex beat Normal
- **Respiratory** - Chest B/L clear.
- **GIT** - P/A soft, non-tender, organomegaly absent

Integumentary System

O/E of Skin

- Site of Lesion - Over Left Buccal region
- Lesion - Epidermal
- Distribution - Unilateral
- Character of lesion - Macule
- No. of lesions - 1
- Size - 1.5*2.5 cm
- Colour - White
- Itching - Mild
- Discharge - Absent

Superficial Sensation on lesion

- Pain - Absent
- Swelling - Absent
- Paraesthesia - Absent

Hetu - External Application of a depigmentation cream

Samprapti

Upon the activation of causal factors (*Hetu*), all three *Doshas* became aggravated, leading to a wide dissemination of the *Tridoshas* throughout the body via lateral movement (*Tiryak Gati*). This pathogenic process, known as *Sthansanshraya*, manifested beneath the cutaneous layers within the left facial region, resulting in depigmentation of the skin at this specific location (*Vyakti*). Consequently, the patient displayed the manifestation of *Shwitra Kushtha Abhivyakti*. The patient exhibited several indicative factors in their pathogenesis (*Samprapti Ghataka*).

Samprapti Ghatak

- **Dosha** - *Tridosha*
- **Dushya** - *Rasa, Rakta, Mamsa, Meda*
- **Agni** - *Jathragni, Dhatwagni Mandya*
- **Srotas** - *Rasavaha, Raktavaha, Mamsavaha, Medovaha,*
- **Srotodushti** - *Sanga*

- **Rogmarga - Bahya**
- **Udhbhav Sthana - Amashaya**
- **Vyakta Sthana - Twacha**
- **Swabhav - Chirkari**
- **Sadhyasadhyta - Yapya**

MATERIALS AND METHODS

Assessment Criteria

- **Subjective Criteria** - Patient was observed for improvement in hypo-pigmented patches and improvement in general condition.
- **Objective Criteria** - Improvement calculated n basis of VETI scoring method.

Score	0	1	2	3
No. of patches depending on % of area involved	Absent	1-29%	30-69%	70-100%
Colour	Normal	>=50% filling with normal tensity	<50% of filling with pinkish discoloration	White patches
Itching	Absent	Mild	Moderate	Severe
Patches	Absent	Solitary	Segmental	Generalized

Chikitsa Vivaran - Shaman Chikitsa was given to patient for 3 months as follows.

SN	Treatment	Dose and Anupana	Days
1.	Praval Pishti Giloy Sat Ras Manikya Manjistha Churn Bakuchi Churn	10g 10g 3g 100g 50g (Mix all together and	30 days

		advised to take 1 tsf bd after meal with honey)	
2.	Divya Melanogrit Gold Tab	2 tab bd after meal with water	30 days
3.	Amalaki Rasayana	1 tsf to be soaked overnight and taken in the morning	30 days
4.	Mahamanjisthadi Kwath	2tsf with equal water bd after meal	30 days

RESULTS

VETI score formula: (Percentage of head involvement x grade of tensity) + (Percentage of trunk involvement x grade of tensity) 4+ (Percentage of upper limbs involvement x grade of tensity) 2+ (Percentage of lower limbs involvement x grade of tensity) 4+ (Percentage of genitalia involvement x grade of tensity) 0.1

Percentage of involvement = Area Score
0 = 0%
1 = 1-9%
2 = 10-29%
3 = 30-49%
4 = 50-69%
5 = 70-89%
6 = 90-100%

Stage 0	Normal Skin
Stage 1	Hypopigmentation (including trichrome & homogeneous lighter pigmentation)
Stage 2	Complete depigmentation with black hair and with perifollicular pigmentation
Stage 3	Complete depigmentation with black hair and without perifollicular pigmentation
Stage 4	Complete depigmentation with compound of white and black hair with/without perifollicular pigmentation
Stage 5	Complete depigmentation plus significant hair whitening

VETI score calculation done as below:

Before treatment

$$\begin{aligned} \text{VETI: } & (\text{Ph*Th}) + (\text{Pt*Tt}) 4 + (\text{Pu*Tu}) 2 + (\text{Pl* Tl}) 4 + (\text{Pg * Tg}) 0.1 \\ & = (1*3) + (0*3)4 + (0*3)2+ (0*3)4 + (0*3)0.1 \\ & = 3 \end{aligned}$$

After treatment

$$\begin{aligned} \text{VETI: } & (\text{Ph*Th}) + (\text{Pt*Tt}) 4 + (\text{Pu*Tu}) 2 + (\text{Pl* Tl}) 4 + (\text{Pg * Tg}) 0.1 \\ & = (0*0) + (0*0)4 + (0*0)2+ (0*0)4 + (0*0)0.1 \\ & = 0 \end{aligned}$$

According to the Vitiligo Extent Tensity Index (VETI) assessment, a marked enhancement in the patient's condition was noted, as the VETI score reduced from 3 prior to treatment to a score of 0 following treatment. This improvement was particularly evident in the subjective criteria, where a 90-95% re-pigmentation of the hypo-pigmented patch was observed, accompanied by a return to normal skin colour intensity in the left buccal (cheek) region.

Criteria	Score	
	BT	AT
Number of patches	1	0
Colour	3	0
Itching	1	0
Hypo-pigmented patch	1	0



DISCUSSION

Vitiligo, known as *Shwitra* in Ayurveda, can be effectively managed through *Shamana Aushadis* (medicinal treatments). Initiation of treatment during the early stages often yields satisfactory outcomes. In this particular case a patient presented with a whitish discoloured patch on the left buccal region (cheek), significant progress was observed within a month of administering *Shamana Aushadis*. The initially white patches transitioned to a pinkish hue. Subsequent follow-ups demonstrated a gradual improvement, with the de-pigmented area filling in gradually and exhibiting a normal skin tone after the first follow-up. By the second follow-up, there was a 50% improvement in the condition. Remarkably, after the third follow-up, dark pigmentation was observed over the previously white patches, showing a 90-95% filling in the left buccal region. The overall improvement was assessed according to the Vitiligo Extent Tensity Index (VETI) score.

Upon a thorough assessment of the patient's medical history, a treatment regimen was formulated. In the treatment of Vitiligo, there exist two primary objectives: firstly, to halt or prevent further depigmentation, and secondly, to stimulate the process of re-pigmentation.

For individuals presenting with *Saama-Avastha* (a state of vitiated *Doshas* with relatively mild symptoms), a therapeutic approach was initiated, involving *Pachana* (digestive enhancement), *Deepana* (appetite promotion), *Klednashana* (moisture-reducing), and *Krumihar Chikitsa* (parasite-alleviating treatment). This treatment was administered alongside a regimen of *Haritaki Churna* (powdered *Terminalia chebula*) on a daily basis as *Samsrana* (*Nitya Virechana Dravya*).

Once the patient exhibited *Nirama Lakshana* (absence of disease-specific symptoms), a comprehensive treatment strategy was employed for a duration of three months, focusing on the reduction of *Kapha* and *Pitta Doshas* (biological elements), and addressing specific ailments associated with Vitiligo.

In light of *Bakuchi's* recognition as a *Vyadhi Pratyani* (disease-specific) drug for *Shwitra Kushtha* (Vitiligo), it was initiated from the outset as an internal medication, forming an integral component of the treatment regimen. *Bakuchi Churna* contains constituents like psoralen, isopsoralen, bakuchiol, bavchinin, and corylin, all of which possess antioxidant attributes. These constituents not only stimulate melanocytes for the synthesis of melanin but also exert an immune-modulatory influence. It is administered in conjunction with a blend of therapeutic agents, such as blood-purifying (*Raktashodhak*), *Kapha-Pitta* alleviating (*Kapha-Pittahar*), and rejuvenating (*Rasayana*) drugs. This combination includes *Praval Pishti*, *Giloy Sat*, *Ras Manikya*, and *Manjistha Churna*.

Divya Melanogrit Gold Tablet represents a proprietary Ayurvedic formulation meticulously crafted by *Divya Pharmacy*. This formulation comprises a unique blend of therapeutic ingredients, including *Swarna Bhasma*, *Rajat Bhasma*, *Mukta Bhasma*, *Rasmanikya*, *Tamra Bhasma*, *Shudh Bakuchi*, *Khadir*, *Manjistha*, and *Amaltas*. It functions as a robust revitalizing agent, promoting blood purification (*Raktashodhak*), and offering antioxidant and immune-modulating properties. Furthermore, it demonstrates the capacity to mitigate inflammation and promote overall skin health. The unique composition of *Melanogrit Gold* initiates and augments a systemic response within the body. This response, in turn, activates the brain's

activity directed towards the affected area of the skin. It also stimulates the pituitary gland, responsible for the production of melanocytes required for melanin synthesis. Consequently, this combination aids in the restoration of the skin's natural pigmentation.

Amalaki, characterized by its *Alavana Pancha Rasa* (five distinct tastes with a predominance of sour), *Sita Virya* (cooling potency), and *Madhura Vipaka* (sweet post-digestive effect), serves as a *Tridoshahara* agent by harmonizing the three *Doshas*. Its *Rasayana* (rejuvenating) and *Vayasthapana* (age-sustaining) properties promote the development of *Prasastha Dhātu*, consequently retarding cellular degeneration while fostering the generation of new cells. Additionally, *Amalaki* exhibits *Kushthagha* properties, which are particularly relevant in the context of Vitiligo, an autoimmune disorder. Notably, the potent immune-modulatory characteristics of *Amalaki*, found in the *Amalaki Rasayana* counteract the autoimmune mechanism, including the presence of antibodies against melanin that have been isolated from the serum of Vitiligo patients.

Mahamanjsthadhi Kwath contains herbs exhibiting a range of properties, including *Varnya* (improving complexion), *Kapha Pittashamak* (balancing *Kapha* and *Pitta Doshas*), *Shothahar* (reducing oedema), *Kushtaghna* (treating skin diseases), and *Vranropak* (wound healing). Most of these substances possess *Tridoshaghna* (alleviating all three *Doshas*) or *Kapha Pittahara* (mitigating *Kapha* and *Pitta Doshas*) characteristics due to their inherent qualities of having *Tikta* (bitter), *Katu* (pungent), *Kashaya* (astringent) taste, *Laghu* (light), *Ruksha* (rough) properties, and *Ushna Veerya* (hot potency), with a *Katu Vipaka* (pungent post-digestive effect).

These substances collectively exert their therapeutic pharmacological effects based on their inherent qualities encompassing taste (*Rasa*), properties (*Guna*), potency (*Veerya*), post-digestive effect (*Vipaka*), and specific properties (*Prabhava*). These actions align with the principles of *Samprapti Vighatana Chikitsa Siddhanta*, emphasizing the disruption of the disease process.

CONCLUSION

The findings of this case report illustrate the successful management of Vitiligo through Ayurvedic formulations, without the use of cleansing therapy (*Shodhan Chikitsa*), thus emphasizing the fundamental principles of *Dhatu Siddhanta*, which pertains to the theory of tissue formation in Ayurveda. However, it is imperative to conduct further extensive trials involving a larger sample size and an extended treatment duration, utilizing controlled medications. The patient's facial lesions and white patches, which had manifested, demonstrated a remarkable recovery after a three-month course of treatment with Ayurvedic medications and dietary modifications. Notably, this treatment approach exhibited a high degree of efficacy in addressing *Shwitra* (Vitiligo). *Vyadhihara Rasayana*, particularly *Bakuchi*, was well-tolerated in this study, even when administered in higher dosages.

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