



Case Study

A CASE STUDY ON MANAGEMENT OF SHWITRA THROUGH AYURVEDA

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ABSTRACT

Introduction: Melanocyte degeneration has a connection to vitiligo, an acquired macular depigmentation disorder. It is thought to be brought on by cells' autoimmune destruction of melanocytes. Frequently symmetrical, generalized vitiligo affects the hands, wrists, feet, knees, neck, as well as the skin around bodily orifices. According to Ayurveda all the skin diseases are categorized under the *Kushtha Roga*. In the classics *Shwitra* is mentioned under *Kushtha Roga Chikitsa*. **Methodology:** The 10-year-old male child, complaint of white discolored spots on his neck and left clavicle region; *Shamana Chikitsa* was used to cure the condition satisfactorily. **Result:** Patient showed encouraging result after *Shamana Chikitsa*, where subjective criteria evaluated using scoring method and objective criteria evaluated using VASI scoring method. **Discussion:** Patient was treated with *Shamana Aushadhis*, where white discolored patches turned to pinkish, and after that the patches turned into normal skin color. Subject was observed with 95% improvement in subjective criteria and VASI scoring improved from 0.25 to 0.10. Hence, the present case study highlights the importance of efficacy of Ayurvedic treatment in *Shwitra*, as mentioned in classics. **Conclusion:** Ayurvedic medicine's effectiveness in curing *Shwitra* was confirmed by the current case study.

INTRODUCTION

Melanocyte degeneration has a connection to vitiligo, an acquired macular depigmentation disorder. The condition is the clinical endpoint of a complicated interplay between environmental, genetic, and immunologic variables. Approximately 0.5-2.0% of the population is affected. Vitiligo affects 50% of all patients before the age of 18, and 25% show depigmentation before the age of 8 years.^[1] Patches of hypopigmentation arise as a result of focal melanocyte loss. It is believed to be caused by the autoimmune destruction of melanocytes by cells. Frequently symmetrical, generalized vitiligo affects the hand, wrists, feet, knees, neck, as well as the skin around bodily orifices.^[2] Segmental vitiligo is confined to a single body part but is not always a dermatome. The depigmentation patches are well discernible.

According to Ayurveda all the skin diseases are categorized under the *Kushtha Roga*. In the classics *Shwitra* is mentioned under *Kushtha Roga Chikitsa*.^[3] The word *Shwitra* is derived from Sanskrit word *Shweta*, which means white patch.^[4] *Shwitra* is a disease where the body develops white patches. According to *Kashyapa Samhita* '*Shweta Bhava Michanti Shwitram*'.^[5] *Kilasa, Daruna, Aruna, Shweta Kushta* are synonyms of *Shwitra*.^[6] According to *Acharya Vagbhatta* it is caused by the three *Dosha's Vata, Pitta* and *Kapha*. There are three different types of *Shwitra* stated in *Dhatus*, depending on where it is found and what the color and texture of skin. When it is situated in *Rakta Dhātu*, it is coppery in color and with burning sensation and loss of hairs; this type of *Shwitra* is called *Pittaj Shwitra*; when it is in *Meda Dhātu*, it is white in color and with itching sensation, this type of *Shwitra* is called *Kaphaja Shwitra*.^[7] *Shwitra* can be morbid due to following condition; macules are diffused and they cannot identify separately, macules present all over the body especially in genitals, palms and lips, macules present in body more than one year, white in color and present in *Meda Dhātu*.^[8] This may be related to vitiligo because of the disease's resemblance in appearance.

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Nidana

Table 1: Showing the Nidana of Shwitra

Aharaja	Viharaja	Manasika
Excessive intake of <i>Dadhi</i> (curd)	<i>Divaswapna</i> , exposure to sun for long hours. <i>Sheeta-Vata Sevana</i> (exposure to cold) working in mud for longer duration daily.	<i>Chinta</i>

Acharya Charaka has described the following factors mainly responsible for occurrence of *Shwitra*. *Viruddha Ahara* has been widely accepted as a causative factor of *Shwitra* by almost all ancient authors. Moreover *Acharya Charaka* has clearly mentioned that *Kilasa* is a disease resulting from *Viruddha-Ahara*.

Acharya Charaka has listed the *Shwitra* under the *Rakta Pradoshaja Vikara* consequently the factor causing *Rakta Pradosha* may also be considered as causative factors of *Shwitra*.

Objective of the study: To evaluate the efficacy of traditional Ayurvedic treatment in *Shwitra* as mentioned in Ayurvedic classical literatures.

Brief history of patient

The present case report is of 10 years old male child, came with complaints of whitish discolored patches on the neck and left clavicle region for 6 months. First time patches were started in 2023, earlier there was only one patch on the left clavicle region and then there were 3 to 4 new patches appear. After this the child patient’s parents brought him to Ayurveda Pedaitric OPD of Sanjeevani Ayurveda Hospital of Dr. Sarvepalli Radhakrishnan Ayurved University, Jodhpur, Rajasthan.

Past History

1. There was no history of above skin complaints before 6 months.

Rupa (clinical findings)

2. No history of DM and other systemic disorders.

Family history

Nothing significant; all other family members are reportedly in good health.

History of previous treatment: There was no history of any medication prior to attend the OPD.

Personal history

- School going child
- Religion –Hindu
- Diet- Vegetarian
- Appetite- Normal
- Bowel- One time per day
- Maturation - 3 to 4 times per day, 1 time per night
- Sleep- Sound
- No H/o allergies to any medications/specific food

Dashvidha Pariksha- His *Prakriti* (physical constitution) was *Kapha-Pittaj*, *Twaka Sara* (having good quality skin), *Madhyama Samhanana* (medium body built), *Sama Pramana* (proportionate body structures) and *Madhyama Satva* (medium psyche) with *Sama Agni*, *Avara Vyayama Shakti* (weak physical capacity) and *Balya Vaya* (childhood period). He presented *Vikriti* in *Rasa*, *Rakta*, *Mamsa*, *Meda* with *Daurbalya* (weakness).

Anthropometric Measurement: The height of patient was 125cm while weight was 24kg.

Table 2: Depicting the findings on his skin

Site of Lesions	Neck and left clavicle region
Lesion	Epidermal
Distribution	Asymmetrical
Character of lesion	Macule
Number of lesions	Total 5 patches 2 large patches, three small patches.
Color	White
Arrangement	Segmental
Itching	Absent
Superficial sensation on lesion	Normal sensation
Inflammation	Absent
Swelling	Absent
Discharge	Absent

Samprapti (Pathogenesis)

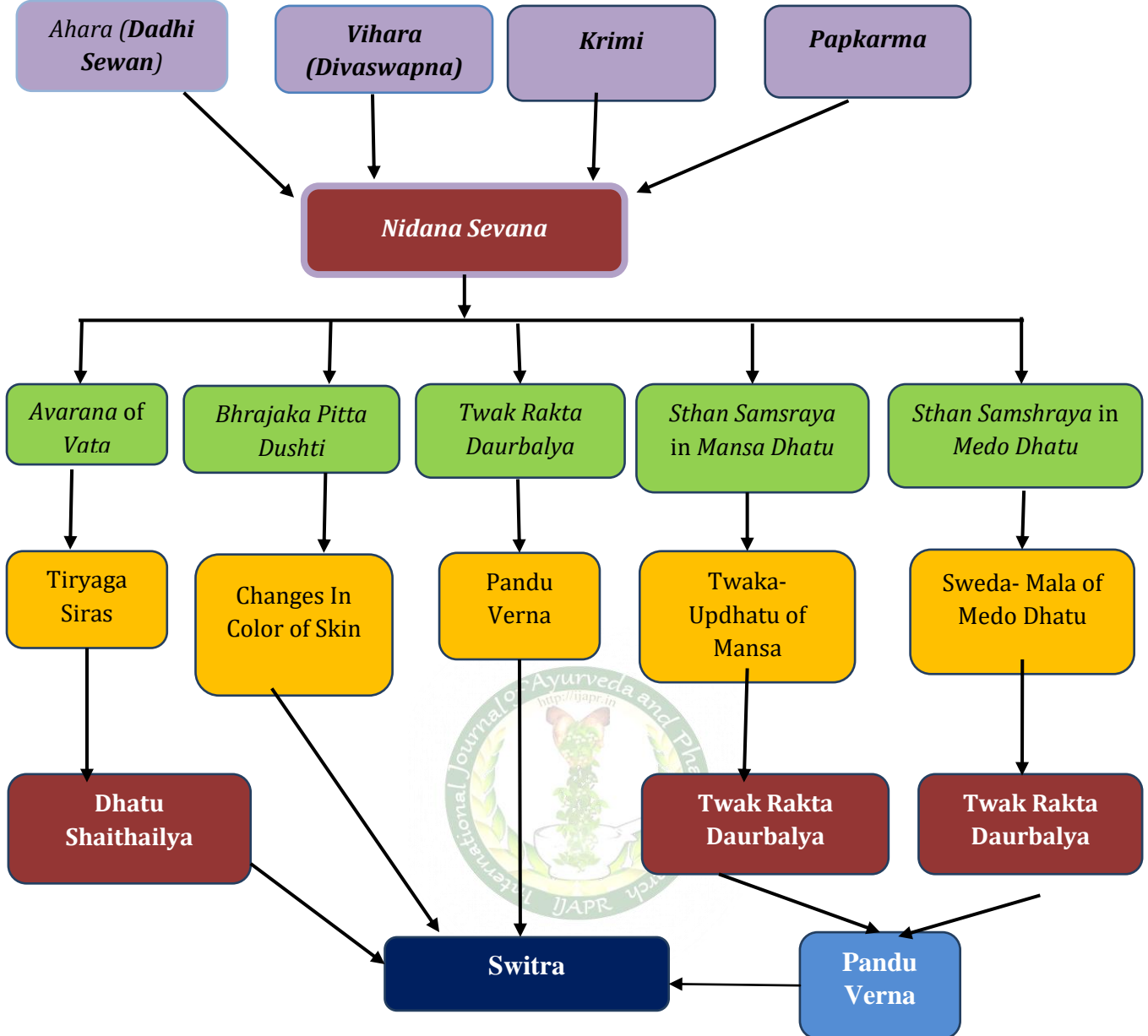


Figure 1: Showing the Samprapti of Shwitra

According to Acharya Harita Vata provokes the Pitta, which is situated in Twak. This vitiated Pitta along with Rakta produces Pandura Varna, which is known as Shwitra. In the Shwitra Roga presentation of symptoms will be in the form of Shweta Varna (whiteness), Ghana (thick), Guru (heavy), Kandu (itching), Snigdha (unctuousness), Bahala, Chirkari (chronicity).

Samprapti Ghataka

- **Dosha** – Tridosha (Pitta-Bhrajaka, Vata-Udana and Vyana, Kapha- Sheleshaka)
- **Dushya** - Rasa, Rakta, Mamsa, Meda
- **Ama**– JatargniJanya Ama
- **Agni** - Jatargnimandhya, Dhatwagnimandhya.
- **Srotas** - Rasavaha, Raktavaha, Mamsavaha and Medovaha
- **Srotodusti Prakara**– Sanga

- **Rogamarga**– Bahya Roga Marga
- **UdbhavaSthana**– Amashaya
- **VyaktaSthana**– Twacha
- **Sancharsthana**- Sarva Sareera through Triyak Sira
- **Rogaswabhava**– Chirakari
- **Sadhyasadyata** – Yasya

MATERIALS AND METHODS

Assessment Criteria

Subjective Criteria

A) Assessment will be done on the basis of size, color of patches, black spots in observed patch.

Evaluation of symptoms of Shwitra will be on the basis of classical sign and symptoms-

- Vaivarnya
- Daaha
- Kandu
- Rukshata

Table 3: Shvitra Prabhavit Kshetra (Vaivarnya)

Sr.No.	Affected Area	Grade
1	No affected area	
2	Few parts s of the body (1 to 5 patches)	1
3	Many parts of the body (6 to 10 patches)	2
4	Nearly all skin surfaces (more then 10)	3

Table 4: Daaha (Burning Sensation)

S.No	Symptoms	Grade
1	No burning sensation	0
2	Occasionally burnings sensation	1
3	Continuous burning sensation	2
4	Continuous and severe burning sensation	3

Table 5: Kandu (Itching)

S.No	Symptoms	Grade
1	No itching	0
2	Occasionally	1
3	Continuous itching	2
4	Continuous and severe itching	3

Table 6: Rukshata (Dryness)

S.No	Symptoms	Grade
1	Normal skin	0
2	Skin without any smoothness	1
3	Dry skin with a stretching sensation over the skin	2

A standard grading system was developed to assess the improvement in treated cases based on symptomology of the *Shwitra*.

Table 7: Grading for color change in observed patch

S.No	Color of patch	Score
1	No change in color (white spot)	0
2	Pink	1
3	Black	2
4	Normal skin color	3

Table 8: Grading for number of black spots in observed patch

S.No	Number of Black Spots in Observed Patch	Score
1	Black spot no appear	0
2	If one to two spot appear	1
3	If three to five spot appear	2
4	If more than five spot appear	3

Table 9: Grading for size of the observed patch

S.N	Size	Score
1	If size increase	0
2	If size same	1
3	10% reducing size	2
4	More than 10% reducing size	3

Objective Criteria

Improvement calculated on basis of VASI scoring method.

Treatment Plan

This patient has been treated with *Shamana Chikitsa*.

Table 10: Treatment Schedule

Date	Shamana Chikitsa	Observation
19/12/202	<p>Before meal</p> <ul style="list-style-type: none"> • <i>Suddha Gandhak</i>- 200mg • <i>Prawal Pishti</i> – 200mg • <i>Arogyavardhinvi Vati</i>- 200mg • <i>Swarna Makshik</i> – 200mg • <i>Amalaki Churna</i> – 1gm • <i>Bakuchi Churna</i> – 1gm • <i>Giloya Churna</i> - 200mg <p>Mix all together with honey 1-1-1 Tsp</p> <p>After meal</p> <ul style="list-style-type: none"> • <i>Khadiraarishta</i> – 3 Tsp BD with equal quantity water. • <i>Panchtikta Ghrita Guggulu</i>- 1 Tab BD • <i>Shashilekha Vati</i> – 1 Tab BD <p>Local Application</p> <ul style="list-style-type: none"> • <i>Lotion leucoskin</i> – BD <p>After half an hour, expose the area to the mild sunlight for 10-12 mins</p> <p>At night</p> <p><i>Panchsakar Churna</i>-1Tsp with warm water (at night)</p>	White patches on left clavicle region, and neck.
12/01/202	<p>Before meal</p> <ul style="list-style-type: none"> • <i>Suddha Gandhak</i>- 200mg • <i>Prawal Pishti</i> – 200mg • <i>Arogyavardhini Vati</i>- 200mg • <i>Swarna Makshik</i> – 200mg • <i>Amalaki Churna</i> – 1gm • <i>Bakuchi Churna</i> – 1gm • <i>Giloya Churna</i> - 200mg <p>Mix all together with honey 1-1-1 Tsp</p> <p>After meal</p> <ul style="list-style-type: none"> • <i>Khadiraarishta</i> – 3 Tsp BD with equal quantity water. • <i>Panchtikta ghrita guggulu</i>- 1Tab BD • <i>Shashilekha Vati</i> – 1 Tab BD <p>Local Application</p> <ul style="list-style-type: none"> • <i>Lotion leucoskin</i> – BD <p>After half an hour, expose the area to the mild sunlight for 10-12 mins</p> <p>At night</p> <p><i>Panchsakarchurna</i>-1Tsp with warm water</p>	White patches started becoming reddish.
9/02/2024	CST	Patches become pink reddish Black spots are seen in patches
29/02/2024	<p>Before meal</p> <ul style="list-style-type: none"> • <i>Suddha Gandhak</i>- 200mg • <i>Prawal Pishti</i> – 200mg • <i>Arogyavardhini Vati</i>- 200mg • <i>Swarna Makshika</i>- 200mg • <i>Amalaki Churna</i> – 1gm • <i>Bakuchi Churna</i> – 1gm • <i>Giloya Churna</i> - 200mg <p>Mix all together 1-1-1 with honey</p>	Skin becomes normal in color.

	<p>After meal</p> <ul style="list-style-type: none"> • <i>Khadiraarishtha</i> – 3 Tsp BD with equal quantity • <i>Panchtikta Ghrita Guggulu</i>– 1Tab BD • <i>Shashilekha Vati</i> – 1 Tab BD <p>Local Application</p> <ul style="list-style-type: none"> • <i>Lotion leucoskin</i> – BD <p>After half an hour, expose the area to the mild sunlight for 10-12 mins</p> <p>At night</p> <ul style="list-style-type: none"> • <i>Tarunkusmakar Churna</i> -1 Tsp • <i>Isabgol Churna</i> - 1\2 Tsp with warm water 	
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RESULTS

Results: VASI score calculation done as below

The VASI (Vitiligo Area Scoring Index) is one of the most frequently cited measurement methods for assessing vitiligo. The VASI score is derived by summation of the percentage of vitiligo involvement at six body regions multiplied by residual depigmentation. The depigmentation degree will be validated as 100%, 90%, 75%, 50%, 25%, and 10%. The percentage of vitiligo involvement is calculated using the palmer method. One hand, including fingers, is equal to 1% of the body surface area (BSA). However, VASI is relative to determination of the amount of pigmentation and area of vitiligo involvement.

$$VASI = \Sigma \{Hand\ units\} \times \{Residual\ Depigmentation\}$$

Table 11: VASI Score

Degree of Depigmentation	Residual Depigmentation
100%	Complete depigmentation
90%	Specks of Pigment present
75%	Depigment > Pigment
50%	Depigment = Pigment
25%	Depigment < Pigment
10%	Only specks of depigmentation

VASI score before treatment

$$VASI = \Sigma \{Hand\ units\} \times \{Residual\ depigmentation\}$$

$$= 1 \times 0.25 = 0.25$$

VASI score after treatment

$$VASI = \Sigma \{Hand\ units\} \times \{Residual\ depigmentation\} = 1 \times 0.10 = 0.10$$

As per VASI scoring for vitiligo patient was observed with significant improvement of VASI scoring 0.25 before treatment to VASI scoring of 0.1 after treatment.

The improvement was observed in subjective criteria with 95-99% filling of hypo pigmented patches with normal skin turn on neck and left clavicle region.

Table 12: Results showing Subjective Criteria's before and after treatment

Criteria's	Score	
	Before treatment	After treatment
<i>Shwitrprabhavit Kshetra (Vaivarnya)</i>	2	0
<i>Daha</i>	0	0
<i>Kandu</i>	0	0
<i>Rukshata</i>	1	0
Color of patch	0	3
No. of black dot in observed patch	0	3
Size	0	3



Before Treatment



After Treatment



Before Treatment



After Treatment

DISCUSSION

In Ayurveda, *Shwitra* can be effectively managed. Early treatment can produce satisfactory results, so long as it is started. In this case patient presents with whitish discolored patches on left clavicular region and neck after 15 days of treatment white patches turned to pinkish with inflammation and then after 20 days of treatment white patches turned into pinkish without inflammation, and after 39 days of treatment gradual filling of depigmented area with normal skin color. The total improvement is evaluated as per VASI score.

The components of *Bakuchi-Churna* include corylin, psoralen, isopsoralen, bakuchiol, bavchinin, and bavachin. These compounds have anti-oxidant properties, help stimulate melanocytes to produce melanin, have an immune-modulatory effect, and are suppressive of antigen-precipitated granulation.^[15,16] *Khadira* extract (*Acacia Catechu*) is one of the main ingredients of *Khadirarishta*. *Khadir* extract is utilized as an antiphlogistic, astringent, antibacterial, refrigerant, immune-modulatory, and blood purifier.^[14] The primary ingredient of *Gandhaka Rasayana* is *Shuddha-Gandhak*, or sulfur, which has a number of possible applications for skin health. *Kushtaghna*, or skin condition, can benefit from *Gandhaka-Rasayana*, which is also *Twachya* and *Rakta-Shodhaka*. *Giloy*

Churna is stimulating melanocytes for the synthesis of melanin, antioxidant, and immune-modulatory properties. Additionally, *Amalaki* exhibits *Kushtaghna* properties, which are particularly relevant in the context of vitiligo, an autoimmune disorder. *Prawal Pishti*, a magical powdered formulation of coral is hallowed with *Madhura*, *Amla* and *Kashaya Rasa* and shows *Laghu* and *Snigdha Guna*. It inherently portrays *Sheeta Virya* and *Madhura Vipaka*. It pacifies all the three *Doshas*, mainly *Kapha-Pitta Doshas*.

The ingredients of *Arogyavardhini Vati* are *Shuddha Parada* (herbal purified mercury), *Shuddha Gandhak* (herbal purified sulphur), *Loha Bhasma* (ash prepared from iron), *Abhraka Bhasma* (purified and processed mica), *Tamra Bhasma* (ash prepared from copper), *Triphala* (*Haritaki*, *Vibhitaki*, and *Amalaki*), *Shilajatu* (mineral pitch), *Guggulu* (gum resin), *Chitraka-Moola*, *Katuki*, juice extract of *Neema* leaf. It supports equilibrium, preserves the health of the digestive tract, and supports liver function. It performs *Shoshana* of various surplus *Snigdha Dravyas* that are in the body. It also performs the *Rakta Vardhana* and the *Pachana* of *Drava* and *Kleda*.

Shashilekha Vati's elements are all *Kapha-Vata Shamaka* due to their *Ushna Virya*, *Katu-Vipaka*, and *Katu-Tikta Rasa*. By virtue of its *Prabhava*, all of these

substances only function as *Kushtaghna*. *Bakuchi* and *Gandhaka* represent *Katu-Tikta Rasa*, whereas *Agni Deepana* represents *Aamapachaka* through *Katu Vipaka* and *Ushna Virya*. *Tamra* uses different *Srotas* to scrape out the lodged *Ama*. *Madhura Vipaka* also uses it as *Vata shamaka*. There is no *Sukshmatikushma Srotas* that *Parada* cannot reach. All of these elements support *Agnivardhana* and the smooth operation of *Pachaka Pitta*. Consequently, high-quality *Ahara Rasa* is formed, which further aids *Dhatu* in achieving the anticipated *Nirama Avastha*. As a result, *Rakta Dhatvagni's* functioning is managed and appropriate *Rakta Prasadana* is performed. It facilitates the appropriate functioning of *Bhrajaka Pitta* and restores the normal color and sheen of the skin, respectively. Through the qualities of *Sukshma*, *Tikshna Guna*, and *Ushna Virya*, *Shashilekha Vati* enters all minute *Srotas* and operates on all *Dosha* and *Dhatu*. As a result, it performs *Deepana* and *Pachana* as well as *Tvachya*, *Varnya*, and *Shvitraghna* actions.^[12]

Bhaishiyaratnavali Kushtha Rogadhikara mentions *Panchatikta Ghrita Guggulu*. *Ghrita*, *Guggulu*, and *Panchatikta Gana Dravyas* are the key ingredients of this medication. Since all of the contents of *Panchatikta Ghrita Guggulu* have *Tikta Rasa*, *Laghu* and *Ruksha Guna*, which acts as an anti-itching property, *Kleda* and *Vikrut Meda Upashoshana*, and *Vrana Shodhaka*, it may be assumed that this is the most likely mechanism of action. It mostly affects *Kleda* (bodily wastes), *Meda* (fat), *Lasika* (plasma), *Rakta* (blood), *Pitta*, *Sweda* (perspiration) and *Shleshma* (spleen).^[13]

Sun Exposure Therapy

In Ayurveda, it is occasionally advised to enhance melanin synthesis in the afflicted areas with controlled sunlight exposure or UV light therapy. The dried fruits of *P. corylifolia* are used to make *Bakuchi* oil, an *Ayurvedic* medicinal oil used to treat vitiligo. Sesame oil is also used. *Bakuchi* (*Psoralea corylifolia*) contains psoralen, which can be used as a photosensitizing agent to induce melanocytes in response to UV light. Applications of oil and exposure to sunlight are the two components of the treatment for the impacted skin areas. Furanocoumarin psoralen is the principal secondary metabolite of *P. corylifolia*. By increasing the skin's sensitivity to UV light, psoralen promotes repigmentation.^[17]

CONCLUSION

Vitiligo is becoming more common as a result of poor lifestyle choices, thus it's critical to discover and eradicate the disease's multiple causes using Ayurvedic principles. Most individuals can achieve pigmentation restoration by adhering to the Ayurvedic therapy procedure outlined in *Shwitra Chikitsa*. *Shwitra* is a disorder that significantly affects both the body and the mind and is typified by cosmetic

impairment. Ayurvedic treatment helps eliminate the disease's underlying cause and prevents a recurrence by resulting in an overall improvement in terms of the number and size of lesions as well as the restoration of normal skin pigmentation. When used conjunction with *Shamana Chikitsa*, these remedies assist eradicates the disease's fundamental cause and prevent it from recurring.

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