International Journal of Health Sciences and Research
Volume 14; Issue: 4; April 2024
Website: www.ijhsr.org
Case Report *ISSN: 2249-9571*

Effectiveness of Siddha Medicine in Treating *Venpadai* (Vitiligo) - A Case Report

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DOI: https://doi.org/10.52403/ijhsr.20240464

ABSTRACT

Venpadai is a synonym for vitiligo in Siddha system of medicine. Vitiligo is an autoimmune, noncontagious pigmentary disorder with complex causes. Though many techniques are available to treat vitiligo, they have their own pros and cons; substantially it is painful, highly expensive and may create adverse reactions. Considering these limitations of the contemporary medicine system, Siddha ethnomedicinal preparation *Karbogi Aavaarai Bhavana Choornam* (KABC) and *Karbogi Thylam* (KT) has been used in treating Vitiligo. A 12 years old female child sought Siddha treatment after the hypopigmentary lesions on her chest and both sides of cheeks did not respond well to the conventional medicine after 8 months of treatment. The Siddha treatment comprised of *Agathiyar kuzhambu* for purgation, KABC internally and KT externally was prescribed. This gave us a good result in treating the hypo pigmented patches. Withal, a detailed study of the same with larger sample sizes will help to formulate a treatment protocol for the corresponding cases.

Key words: *Venpadai*, Vitiligo, Hypo pigmented patches, *Karbogi*, *Psoralea cordifolia, Karbogi Aavaarai Bhavana Choornam, Karbogi Thylam, Agathiyar kuzhambu*

INTRODUCTION

Venpadai, *Swethakuttam*, *Venpulli*, and *Venkuttam* are Siddha equivalents for vitiligo in the modern medical system[1]. A non-contagious autoimmune hypo pigmentary disorder with multiple underlying causes is termed as Vitiligo[2]. It is characterized by the formation of white patches as a result of the loss of epidermal melanocytes. Patients' quality of life is significantly impacted since they feel depressed and stigmatized as a result of their illness[3]. There is a religious misconception that links vitiligo to sin. Multiple mechanisms, including metabolic disorders, oxidative stress, generation of inflammatory mediators, and auto immunological responses may contribute to the pathogenesis of this skin disorder[4].

A little more than 1% to 2% of people worldwide suffer from this condition[5]. Indians from the Indian subcontinent had the highest recorded incidence[6].

UV phototherapy and topical corticosteroids are the first-line therapy for re-pigmentation. Many of these topical and light therapies aids in re-pigmentation treatment periods[7]. There are other treatment options for vitiligo, such as punch graft, skin graft, tattoo, and camouflage, however they are pricy and may create adverse reactions[8].

In Siddha literature, *Siddhar Yugimuni* mentioned skin diseases as *Kuttam* and

classified it into 18 types. *Venkuttam* or *Swetha kuttam* is one among them[9]. The following vitiligo case was treated with the *Karbogi Aavaarai Bhavana Choornam* (KABC) and *Karbogi thylam* (KT). KABC is a Siddha ethno medical preparation and KT is a Siddha proprietary medicine[10]. Since this medicine provides a better result in Vitiligo treatment and it is assessed by VASI score and evidenced by photographs.

Patient information:

Primary concerns and symptoms of the patient:

The main complaint of a 12-year-old female patient who visited our Out Patient Department, was that she had depigmented patches on her chest and both sides of cheeks, but no itching. The area of depigmented patches was increasing day by day.

Medical, family and psychosocial history including relevant genetic information:

Before 11 months, she was in a good health condition then she gradually got some discolored macule over her chest. She noted that the size of that depigmented macule was gradually increasing and new patches were started to appear on both sides of her cheeks. No relevant family history, there was no history of hypothyroid disorder, Addison's disease, pernicious anaemia, type 1 diabetes mellitus and other autoimmune, metabolic or genetic disorders.

She was experiencing social stigmatization, embarrassment and low self-confidence and her family members were worrying about her future.

Relevant past intervention with outcomes:

This condition was diagnosed as vitiligo and underwent allopathic treatment in various reputed dermatology clinics, there she was treated with oral and topical corticosteroids and topical immune suppressants.

She had noticed good prognosis in the early stage of treatment but later she observed that the size of the lesion was increasing and the patches were spreading over the large area of chest and both sides of cheeks. She continued the allopathic treatment for 8 months but she was unsatisfied with the results.

Clinical findings:

Physical examination was carried out after getting informed consent. On examination, she was active and well oriented in terms of time, location and person and mentally stable. She had depigmented patches over chest and both sides of cheeks. The patches were whitish, pale and scale free, no loss of sensation over patches.

Diagnostic testing:

Routine blood and urine investigations were done and no abnormalities detected. Thyroid hormones were in normal levels. She was diagnosed as *Venpadai* (Vitiligo/ Leucoderma). Figure 1,2 & 3 shows the hypo pigmented lesions before treatment.

Figure 1 - Before treatment - Hypo pigmented patches on chest

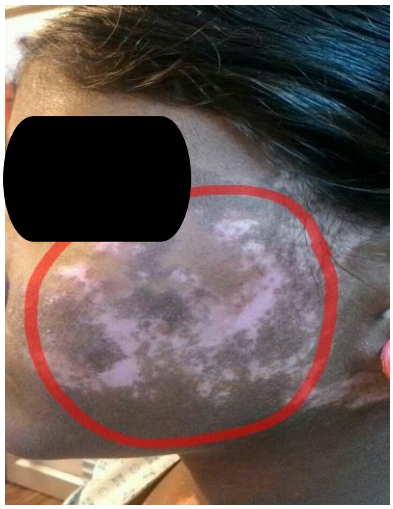

Figure 2 -Before treatment – Hypo pigmented patches on left side of the cheek

Figure 3 - Before treatment - Hypo pigmented patches on right side of the cheek

Diagnosis:

The depigmented patches had normal sensation and there was no hair fall over that patches. So it was not considered as leprosy. The patches of Tinea versicolor will have well defined margins and scaly texture with mild itching, since these features were absent in the depigmented patches of above mentioned case, it was diagnosed as Vitiligo.

Vitiligo Assessment Severity Index (VASI) is a quantitative parametric test for assessing extension and severity of vitiligo. It is calculated by the formula,

VASI = Summation of all body sites in hand units × Residual depigmentation

The extension of body sites involvement was derived using VES calculator and residual depigmentation was expressed in 0-100%.[11]

Here, in this patient VASI score before treatment was 1.22

Types of therapeutic interventions:

On first day, to pacify the vitiated humors, to enhance the drug absorption and to alter the gut microbial dysbiosis, purgation therapy was preferred. Then trial drugs were administered.

Administration of therapeutic interventions (dosage, strength, duration):

130 mg of *Agathiyar kuzhambu* was given with *Sangankuppi ilai saaru* (*Clerodendron inermae* leaf juice)[12] at early morning. Easilly digestive food was advised for the next two days. From the fourth day, the following medications given in table 1 were started.

Table 1 - Medications

Medicines	Route of Administration	Dosage	Time of Administration	Duration
KABC	Oral	1 gram with 5 grams of ghee	Twice a day after meal	90 days
KT	External application	Sufficient quantity	Twice a day, Apply over the patches and allow sun exposure for 15 minutes	90 days

Changes in therapeutic interventions:

The above trial medicines were continued for 90 days without any change since there was a good prognosis.

Historical and current information from this episode of care organised as a timeline is given in a table – 2

Table 2 - Timeline of events

Date	Follow up and observation
Before 8 months	Depigmented macules over her chest and both sides of cheeks. She consulted dermatologist, corticosteroids and immune suppressants were prescribed. Positive prognosis was noted on the initial days of treatment. But on later, the areas of patches were increasing.
07. 02. 2023	The area of depigmented patches was increasing day by day. Siddha consultation was done and purgative medicine was prescribed.
13. 02. 2023	After purgation, no improvements were noted. KABC and KT were prescribed.
27. 02. 2023	First follow up The depigmented areas were become reddish, mild itching and burning sensation was felt Advised to apply coconut oil over the itchy areas
13. 03. 2023	Second follow up The rate of spreading of depigmented patches were reduced than before
27. 03. 2023	Third follow up No new depigmented spots were appeared

12. 04. 2023	Fourth follow up Re-pigmented spots were noted in the depigmented macules
26. 04. 2023	Fifth follow up In depigmented patches, the re-pigmented area was increased than depigmented area.
15. 05. 2023	Sixth follow up The majority of the depigmented area had achieved normal skin colour.

Clinician and patient assessed outcome:

After 4 weeks of treatment, re-pigmented spots were noted in the depigmented patches, size of the patches didn't increase and no new depigmented spots were appeared. This indicates a good prognosis. Within 10-12 weeks of treatment, the majority of the depigmented area had achieved normal skin tone.

Important follow- up diagnostic and other test results:

VASI score calculated after treatment was 0.08. The lesions after treatment were shown in figures 4, 5 and 6.

Figure 4 – After treatment - Hypo pigmented patches on chest

Figure 5 - After treatment- Hypo pigmented patches on left side of the cheek

Figure 6 - After treatment- Hypo pigmented patch on the right side of the cheek

Intervention adherence and tolerability:

Initially, when exposed to sunlight after the application of *Karbogi thylam*, the depigmented areas were become reddish, mild itching and burning sensation was felt. This indicates that the treatment is working. This was further resolved by application of coconut oil.

Adverse and unanticipated events:

No adverse reactions were noted during the treatment.

DISCUSSION

The strength of this case is there was no history of thyroid dysfunction, metabolic or autoimmune disorders. Topical and systemic corticosteroids and immunosuppressive drugs like tacrolimus and pimecrolimus are used extensively in the management of vitiligo, though they have good prognosis, long term usage of these medicines manifests complications,[13,14] considering the limitations of contemporary medicine system, Siddha has much convincing approach.

This patient was presented with hypo pigmented lesions and diagnosed as *Venpadai (Swethakuttam, Venkuttam*) which are the similar terms for Vitiligo. As mentioned by *Siddhar Theraiyar "Vaatha malaathu meni kedathu",* deranged *Vaatham* is the main reason for all skin diseases[15]. Decreased *raththaam* and *rasam thaathu* plays a significant role in causing hypo pigmented lesions[1].

As per the quote "*Viresanathal vatham thaazhum*",[16] Purgation was prescribed with *Agathiyar kuzhambu* in *Clerodendron inermae* leaves to alleviate the deranged *Vaatham*. Then KABC and KT were given. Internal medicine KABC has *Karbogi (Psoralea corylifolia), Aavarai (Cassia auriculata), Karisaalai (Eclipta alba)* and cow's urine.

Karbogi (Psoralea corylifolia) which is the main ingredient of both KABC and KT, is indicated for skin diseases[17]. *Aavarai (Cassia auriculata)* has an ability to nourish the skin[17] and it has an emollient activity thereby it prevents the displeasing effects of *Psoralea corylifolia. Cassia auriculata* has another name called *Yemaputpi*[17], *yemam* means gold[18], as the name indicates this herb contains trace amount of gold. According to Siddha literature, gold containing medicines such as *Thanga parpam* (Gold bashma) has an ability to cure *Venpadai*[1]. *Karisalai (Eclipta alba)* is indicated for Kuttam (skin diseases) and anaemia[17]. It is listed under *Sembu sathu mooligaigal* (herbs containing copper)[18] which can catalase the melanogenesis from tyrosine by increasing the activity of copper containing enzyme tyrosinase which is responsible for the first step in melanogenesis[19].

Psoralea is thought to exert its local arterial pharmacological action on the capillary plexus, dilating the capillaries via inducing the production of pigments by melanoblasts. The pigment gets inside the skin's white vitiliginous areas.[20]

If hairs present in the vitiligo lesions turned grey and the areas which does not contain hair follicles such as lips, genitals, palm and sole are resistant to treatment due to the lack of the vital melanin precursors, tyrosine and phenylalanine [21] which are usually reside in hair follicles. These lesions will show least response, so in this case we have to check for the associated disorders and prescribe medicines according to the patients *Yakkai ilakkanam* (Body constitution) and *Kaala vanmai* (Seasonal variations)

For the treatment of vitiligo, numerous herbal remedies are commonly utilized. Its exact components and mode of action are yet unknown, though. They still have a long way to go before they can be deemed an anti-vitiligo agent due to the lack of clinical trials with larger samples.

CONCLUSION

Based on the aforementioned findings and analysis, it can be inferred that the visual surveys' measurements of the *Psoralea corylifolia* seed powder—which is the primary component of the internal and externally medications KABC and KT—show satisfactory results. There is a need for topical and oral administration of natural medicines that are less expensive and safer than currently available conventional therapies, despite the riskier and more costly numerous regimens.

Patient perspective:

Initially, when the patient visited first time to the Siddha outpatient department, she was very depressed and worried about her hypo pigmented patches in cheeks. She took corticosteroids but the result was not satisfactory. After starting the Siddha treatment her depigmented patches were started to re-pigment. She was happy after seeing the pigments in depigmented areas and got confidence in Siddha medicine and continued the medication for 3 months.

Informed consent:

A written informed consent has been taken from the patient for publication of the results for the sake of knowledge to the scientific society.

Declaration by Authors
Acknowledgement: None
Source of Funding: None
Conflict of Interest: The authors declare no conflict of interest.

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How to cite this article: Samooga Neethi Jaganathan, Barathi Kannamma Govindarasu, Vijay Kumar Perumal. Effectiveness of siddha medicine in treating *Venpadai* (Vitiligo) – a case report. *Int J Health Sci Res.* 2024; 14(4):511-517. DOI: *https://doi.org/10.52403/ijhsr.20240464*

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