

Clinical study on efficacy of the Traditional Sri Lankan Oil 'The Kakodumbaradi Taila' with selected Ayurvedic preparations on Shvitra (Vitiligo)

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ABSTRACT : Shvitra is a disease described in Ayurveda; which is produced by vitiation of Vata, Pitta and Kapha Doshas. The signs and symptoms of Shvitra are; non exudative white, red or coppery-red coloured patches on the skin, destruction of the skin, loss and discolouration of the hair, roughness, dryness, itching and burning sensation of the patches. It can be correlated with Vitiligo which is progressive whitening of the skin and hair characterized by the total absence of melanocytes in affected areas of the skin. This clinical study was carried out to scientifically evaluate the efficacy of the traditional Sri Lankan oil, 'Kakodumbaradi Thaila' which was used by Rev. Kirielle Gnanavimala, supplemented with selected additional Ayurvedic preparations namely; Triphala Kwata, Shwetari Rasa, Kaishor Guggulu, Manibhadra Choorna and Ithriphal-E-Shahthira on Shvitra. These supplementary preparations were in-cooperated through experience, by Dr. Karunarathna. Thirty five Shvitra patients were selected and divided into two groups randomly. First group, which consists of twenty five patients, was treated with the aforesaid medicines and the second group, which consists of ten patients, was treated with the placebo. The duration of the treatment was 120 days. The response to the treatment was recorded and therapeutic effects were evaluated through symptomatic relief of the patients. Re-pigmentation of white patches was observed in the treated group and the other signs and symptoms of Shvitra (Vitiligo) were also reduced partially or completely during the treatment period. It was observed that Kakodumbaradi Thaila and aforementioned medicines are effective in treatment of Shvitra (Vitiligo).

Key words : Shvitra, Vitiligo, Kakodumbaradi Thaila.

INTRODUCTION

Shvitra is a disease described in majority of the Ayurvedic texts. It has been termed as Daruna, Aruna and Kilasa. According to Ashtanga Samgraha, Shvitra is engendered by vitiation of Vata, Pitta and Kapha Doshas. Vitiating Tridosha invade Rasa, Rakta and Mamsa Dhatus and produce Shvitra¹. According to Sushruta Samhita, when vitiating Tridosha invade only Rasa Dhatu/Twak, it is known as Kilasa³. Charaka Samhitha mentions that vitiating Tridosha invade Rakta, Mamsa & Medas Dhatus and produce Shvitra². Sushruta and Vagbhata have mentioned three types of Shvitra; namely Vataja, Pittaja and Kaphaja^{3,1}. Charaka mentions three types of Kilasa namely Daruna, Aruna and Shvitra², but has not described clinical features separately.

According to Sushruta and Ashtanga Samgraha, the signs and symptoms of Vataja Shvitra are Aruna (red or light red in colour), Parusha (roughness), Paridhwansi

(destroy the skin) and Ruksha (dryness). Tamra (coppery red), Kamalapatrawath (like a lotus petal), Daha (having burning sensation) and Romavidhwansi (loss or damage to hair) are the signs and symptoms of Pittaja Shvitra. The signs and symptoms of Kaphaja Shvitra are; Swetha (white colour), Ghana (thick), Guru (heavy), Kandumath (itching) and Snigdha (unctuous)^{3,1}.

Vitiligo is an acquired condition in which circumscribed, de-pigmented white patches develop on the skin, including the face, limbs, torso and groin, around the eyes, nostrils, mouth and mucous membranes. The patches may grow, shrink or remain constant in size. Lesions are often symmetrical. Premature graying of hair, de-pigmentation of facial and body hair and sun sensitivity are the signs and symptoms of Vitiligo. Therefore, Shvitra can be correlated with Vitiligo.

About 0.5 to 1 percent of the world's population, or as many as 65 million people, suffer from Vitiligo. Half of the people who have Vitiligo develop it before the age of 20. Most develop it before their 40th birthday. The disorder affects both sexes and all races equally. However it is more noticeable in people with dark skin. Vitiligo may also be hereditary. However, only 5 to 7 percent of children will get Vitiligo even if a parent has it, and most people with Vitiligo do not have a family history of the disorder.

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Kakodumbaradi Thaila was used by Rev. Kirielle Gnanavimala Thero to treat patients suffering from Shvitra successfully. Ayurvedic physician Dr. Karunarathna is experienced in treating Shvitra patients with Triphala Kwata, Shwetari Rasa, Kaishor Guggulu, Manibhadra Choorna and Ithriphal-E-Shahthira and Kakodumbaradi Thila very effectively. But no scientific evaluation has been undertaken so far. Hence, the present study was carried out in order to scientifically evaluate the efficacy of aforesaid preparations on Shvitra.

MATERIALS AND METHODS

Selection of patients : Thirty-five patients with Shvitra (Vitiligo) were selected from the Ayurvedic Teaching Hospital, Borella, Sri Lanka. The selected patients were randomly divided into two groups. Twenty five of them were registered for the treatment group and ten patients were registered for the control group.

Clinical Study : All details of the patients including present history, past history, treatment history, family history, dietary habits, addiction, and Prakriti were recorded before the treatment. Photographs were taken before and after the treatment.

Patients in the first group were treated with the six prepared medicines. Five of these were given orally, namely: 30 ml of Triphala Kwata twice a day, 250mg each of 2 pills of Shwetari Rasa twice a day, 250mg each of 2 pills of Kaishor Guggulu twice a day, 10g of Ithriphal-E-Shahthira twice a day, 5g of Manibhadra Choorna at night. The 15 ml of Kakodumbaradi Thaila was externally applied once a day. After applying the oil in the morning on Vitiligo patches the patients were exposed to direct sun light for 30 minutes between 8.30 - 9.30 a.m. The second group was treated with placebo in the following manner. 30 ml of Placebo '1' twice a day, 2 pills of Placebo '2' twice a day, 2 pills of Placebo '3' twice a day, 10 g of Placebo '4' twice a day, 5g of Placebo '5' at night, orally. The 15 ml of Placebo '6' was externally applied once a day. After applying the Placebo '6' in the morning on Vitiligo patches, the patients were exposed to direct sun light for 30 minutes between 8.30 - 9.30 a.m. The treatment regimen was carried out for 120 days, for both First and Second group.

Preparation of drugs : 'Kakodumbaradi Tailaya' was prepared by the authors. The other medicines were obtained from the Ayurveda Teaching Hospital, Borella, Sri Lanka.

Preparation of Kakodumbaradi Thaila : Total 20kg of root bark of *Ficus hispida* (Family: Moraceae, Sanskrit Name: Kakodumbari) was cut into small pieces

and pounded well. Juice was extracted by adding 10 l of water. Final volume of the extract was 20 l. The 15kg of leaves of *Atylosia trinervia* (Family: Fabaceae, Sanskrit Name: Chakramarda) was cut in to small pieces and pounded well. Juice was extracted by adding 7 l of water. Final volume of the extract was 20 l. 15kg of *Eclipta prostrata* (Family: Astaraceae, Sanskrit Name: Bhrungaraja) was cut in to small pieces and pounded well. Juice was extracted by adding 6 l of water. Final volume of the extract was 20 l. These prepared extracts were then mixed with 45 l of Thila Thaila (oil of sesame) and heated at a low temperature. A Kalka (paste) was prepared with 5kg each of seeds of *Vernonia anthelmintica* (Family: Astaraceae, Sanskrit Name: Atavijiraka) and *Cassia absCUS* (Family: Fabaceae, Sinhala Name: Bodi), and then added to the aforesaid mixture. The whole mixture was stirred continuously to avoid the Kalka adhering to the pot. When it reached the 'Sama Paka' stage, the medicated oil was taken out from the fire, allowed to cool naturally and was filtered.

Preparation of Triphala Kwata : Total 500g each of the pericarp of *Terminalia chebula* (Family: Combrataceae, Sanskrit Name: Abhaya), *Terminalia bellerica* (Family: Combretaceae, Sanskrit Name: Vibhitaka) and seeded fruits of *Phyllanthus embilica* (Family: Euphorbiaceae, Sanskrit Name: Amalaki) were boiled in 48 l of water until reduced to 6 l.

Preparation of Shwetari Rasa : Equal quantity of purified Parada (Mercury), purified Gandhaka (Sulphur), pericarp of *T. chebula*, *T. bellerica*, seeded fruits of *P. embilica*, fresh entire plant of *E. prostrata*, dried seeds of *V. anthelmintica*, purified kernel of *Semecarpus anacardium* (Family: Anacardiaceae, Sanskrit Name: Bhallataka), dried seeds of *Sesamum indicum* (Family: Pedaliaceae, Sanskrit Name: Asita Thila), kernel of seeds of *Azadirachta indica* (Family: Meliaceae, Sanskrit Name: Nimba) were ground with the juice of *E. prostrata* and allowed to dry in wither. When well dried, it was ground with the juice of *E. prostrate*. This procedure was repeated 5-6 times and finally prepared pills with a dried weight of 250mg each.

Preparation of Ithriphal-E-Shahthira : Powders of 13 Kg of pericarp of *T. chebula*, 4 Kg of pericarp of *T. bellerica*, 2.25 kg of seeded fruits of *P. embilica*, 1.25 kg of *Cassi senna* (Family: Fabaceae, Sanskrit Name: Rechani), 1 kg of fruits of *Vitis vinifera* (Family: Vitaceae, Sanskrit Name: Draksha), 1 kg of *Nelumbo nucifera* (Family: Nelumbonaceae, Sanskrit Name: Kamala), 5kg of *Fumaria parviflora* (Family: Fumariaceae, Urdu Name: Shahthira) were mixed together and ground with 24.5kg of Bee's honey until it turned into a fine paste.

Preparation of Kaishor Guggulu : A decoction using 3.84kg of *Tinospora cordifolia* (Family: Menispermaceae, Sanskrit Name: Guduchi), 640g each of the pericarp of *T. chebula*, *T. bellirica* and seeded fruits of *P. embilica*, boiled in 184.32 l of water and reduced to 23.04 l was prepared. Two kg of purified Guggulu was tied with a piece of cloth. This bundle is submerged in the aforesaid decoction and boiling was continued until the volume becomes 25% of the original quantity. Then after filtering decoction and aforesaid bundle of Guggulu is untied and dissolved in the filtrate. The mixture was heated again till it becomes a thick liquid. Next, powders of 96g each of pericarp of *T. chebula*, *T. belleirica*, seeded fruits of *P. embilica*, rhizome of *Zingiber officinale* (Family : Zingiberaceae, Sanskrit Name: Nagara), seeds of *Piper nigrum* (Family: Piperaceae, Sanskrit Name: Sin: Maricha), fruits of *Piper longum* (Family: Piperaceae, Sanskrit Name: Pippali), *Embelia ribes burm* (Family: Myrtaceae, Sanskrit Name: Widanga) and 48g of *Operculina turpethum* (Family: Convolvulaceae, Sanskrit Name: Thrivruth), *Baliospermum montanum* (Family: Euphorbiaceae, Sanskrit Name: Danthi), 120g of sediment of *T. cordifolia* were added to the mixture and heated while stirring well. When the resultant becomes a fine paste, it should be taken out from the fire, allowed to cool down and made into pills with a dried weight of 250mg each.

Preparation of Manibhadra Choorna : Powders of 3.5kg of the roots of *O. turpethum*, 1.7kg of the pericarp of *T.chebula*, 1.3kg of seeded fruits of *P. embilica*, 08 Kg of *E. ribes*, 6.8kg of sugar were mixed together.

Preparation of Placebo '1' for decoction of Triphala Kwatha : The 10ml of permitted chocolate brown colouring was added to 750 ml of boiled and cooled water.

Preparation of Placebo '2' for Shwetari Rasa : The 250g of dried bran mixed with water and ground into a fine paste. Out of this, pills each weighing 350mg, were prepared. These were placed on a pan and heated at a very low temperature till dried. Final weight of pills was 250mg each.

Preparation of Placebo '3' for Ithriphal-E-Shahthira : The 30ml of permitted chocolate brown colouring was added to 250g of bran and ground into fine paste while adding water.

Preparation of Placebo '4' for Kaishor Guggulu : The 30ml of permitted chocolate brown colouring was added to 250 g of bran and ground well so as to make a dark coloured fine paste. Out of this, small

pills each weighing 350mg, were prepared. These were placed on a pan and heated at a very low temperature till dried. Final weight of pills was 250mg each.

Preparation of Placebo '5' for Manibhadra Choorna : The 250g of powdered bran were taken and dried well and used as placebo for Manibhadra Choorna.

Preparation of Placebo '6' for Kakodumbaradi Thaila : The 30ml of permitted chocolate brown colouring was added to 250g of Vaseline.

OBSERVATION, RESULTS AND DISCUSSION

Response to the treatment was observed, recorded and therapeutic effects were evaluated by symptomatic relief. The results are given in Table No.1. Colour changes on the Vitiligo patches during the treatment were observed to be varying and different with individual patients.

In the first stage, in most patients, the whiteness of Vitiligo patch was reduced and the Vitiligo patch seemed to have a light brown cloudy appearance (Figure 01).

In the second stage, in some patients, brown coloured dotted pigmentation appeared around the roots of hair follicles in the skin area, where patches were present (Figure 02).

With some patients, brown coloured pigmentation started from outer border of the patch and progressed towards the center (Figure 03). White hair also changed into brown or black colour gradually. Other symptoms like burning, itching, roughness and dryness also were reduced gradually. It was observed that among 2.7% of patients, itching and burning sensation were increased and skin become dark pink in colour after the treatment.

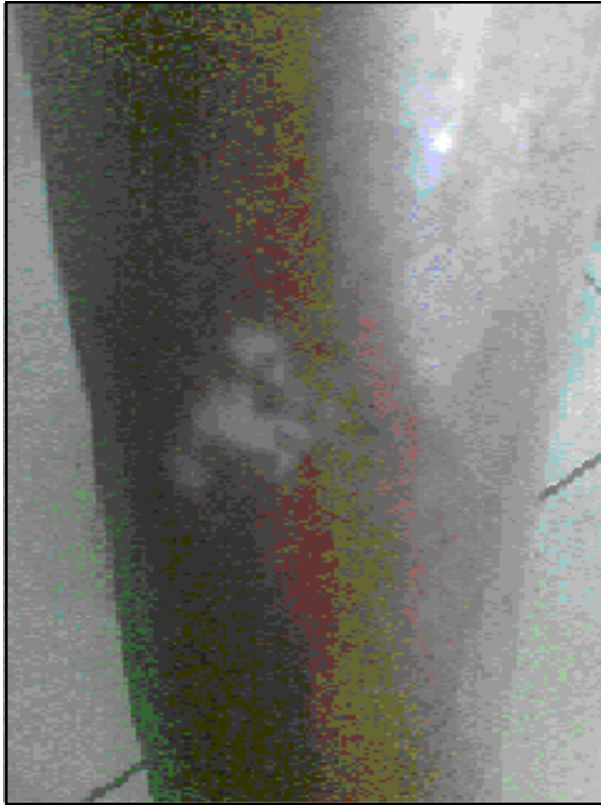
Shvitra is produced by vitiation of Tridosha. Vitiated Tridosha reside in Rasa, Rakta, Mamsa Dhatus and may produce Shvitra. Ingredients of Triphala kwatha, Manibhadra Choorna, Kaishor Guggulu, Shwetari Rasa, Ithriphal-E-Shahthira & Kakodumbaradi Thailaya have the properties of Tridosha Shamaka (pacifying the vitiated Vata, Pitta and Kapha Dosha). Further, they also have the properties of Kushtaghna (reduce skin disorders) and Rakta Shodhaka (purify blood). In addition to the above mentioned properties, Kakodumbaradi Taila has the property of Twak Dosh Hara (nullifying skin disorders). As the drugs used in present study have the properties of Tridosha Shamaka (pacifying the vitiated Vata, Pitta and Kapha Dosha), Rakta Shodhaka (purify blood), they are beneficial for diseases such as Shvitra (Vitiligo) originated

TABLE NO. 1 : PERCENTAGE OF SYMPTOMATIC RELIEF DURING THE TREATMENT :

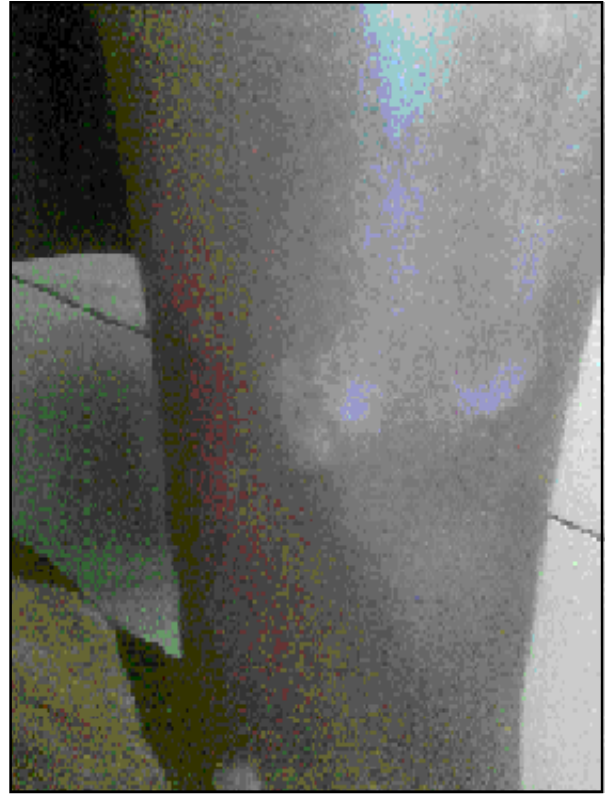
Symptoms	Control Group				Treated Group						
	completely relieved	partially relieved		unchanged	aggravated	completely relieved	partially relieved		unchanged	aggravated	
		>75%	>50%				<50%	>75%			>50%
1. Parusham (Roughness)	---	---	---	37.50%	62.50%	---	---	---	65%	5%	---
2. Ruksham (Dryness)	---	---	---	33.33%	66.67%	---	---	---	22.22%	16.66%	---
3. Ghanam (Thickness)	---	---	---	---	100%	---	---	---	10%	10%	---
4. Sadaham (Burning sensation)	25%	---	---	---	75%	---	---	---	---	---	11.11%
5. Guru (Heavyness)	---	---	---	---	100%	---	---	---	---	14.28%	---
6. Kandumath (Itching)	16.67%	---	---	---	83.33%	---	---	---	---	11.13%	5.55%
7. Snigdham (Unctous)	---	---	---	---	100%	---	---	---	---	20%	---
8. Roma Vidhwamsi (Loss of skin hair)	---	---	---	---	100%	---	---	---	85.71%	---	---
9. Discolouration of the skin hair	---	---	---	---	100%	---	---	---	18.75%	---	---
10. Pari dhwamsi (Destroying the skin)	---	---	---	---	100%	---	---	---	---	40.92%	---
11. Sensory loss	---	---	---	---	100%	---	---	---	---	28.58%	---
12. Sanshrushtam (Colession)	---	---	---	---	100%	---	---	---	---	---	---
13. Glistning	---	---	---	---	100%	---	---	---	---	14.28%	---
14. Skin Colour	---	---	---	---	100%	---	---	---	19.23%	7.69%	---

FIGURE 1 : REDUCING THE WHITENESS OF VITILIGO PATCH :

Before treatment



After treatment



Before treatment



After treatment

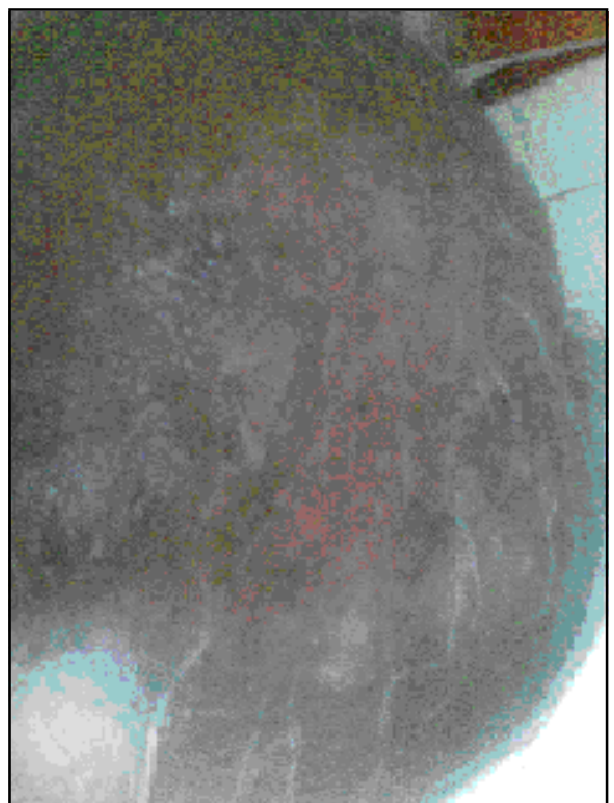


FIGURE 2 : APPEARANCE OF BROWN COLOURED DOTTED PIGMENTATION :

Before treatment

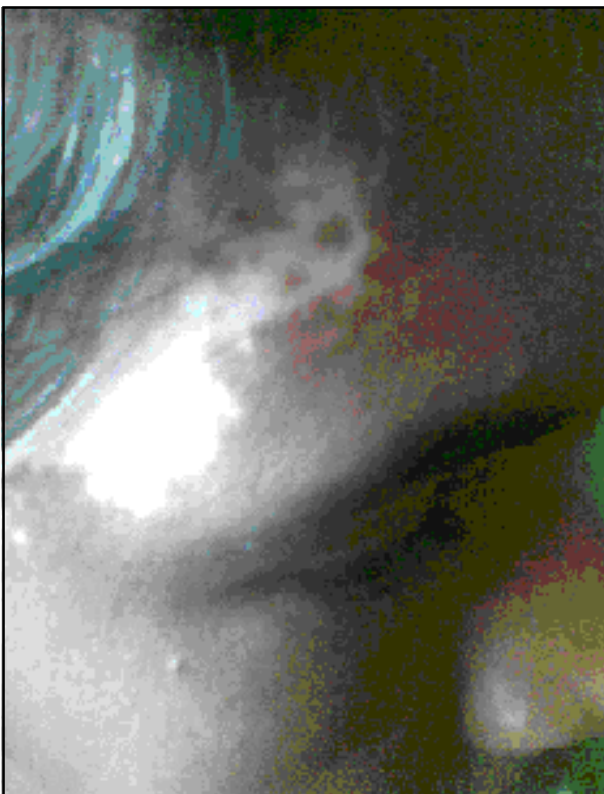


After treatment

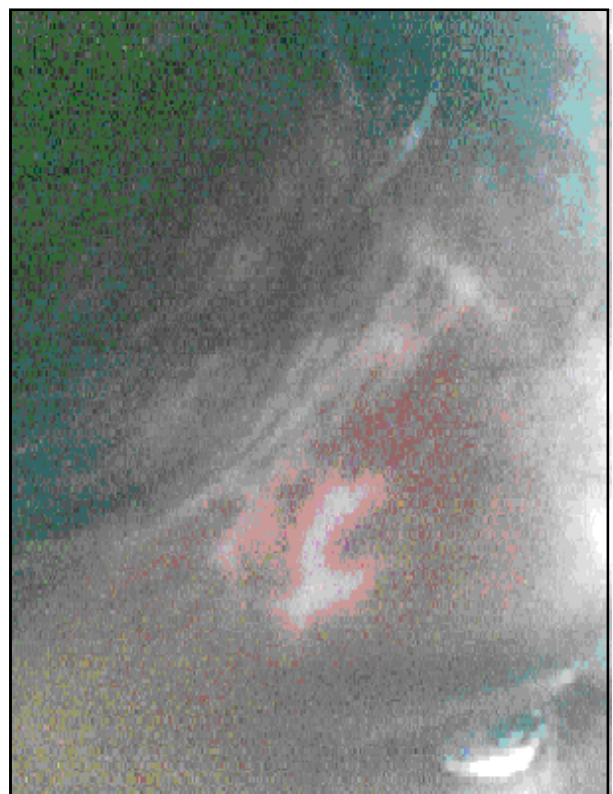


FIGURE 3 : BROWN COLOURED PIGMENTATION STARTED FROM OUTER BORDER OF THE PATCH AND PROGRESSED TOWARDS THE CENTER :

Before treatment



After treatment



by vitiation of Tridosha.

CONCLUSION

It is concluded that the Kakodumbaradi Taila, Triphala Kwatha, Kaishor Guggulu, Shvetari Rasa, Ithriphal-E- Shahthira, and Manibhadra Choorna completely or partially relieve the signs and symptoms in Shvitra. They also help re-pigmentation of the white patches that occur on the skin due to Shvitra (Vitiligo). These medicines can be utilized in treating the patients who are suffering from Shvitra (Vitiligo) successfully and with greater effectiveness. It is proposed that, this therapy be introduced to hospitals as a treatment for

Shvitra (Vitiligo) after study on a larger number of patients with more quantifiable parameters.

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हिन्दी सारांश

पारम्परिक श्रीलंकन 'काकोदुम्बरादि तेल' एवं अन्य आयुर्वेदिक औषधियों के चिकित्सकीय प्रभाव का श्वित्र पर अध्ययन

इ.आर.एच.एस.एस. एडिरिवीरा, ओ. कालावाना, एन. करुनारथना एवं एन. ननयाक्कारा

आयुर्वेद में वर्णित श्वित्र व्याधि वात, पित्त, कफ इन त्रिदोषों के प्रकोप के कारण होती है। प्रस्तुत चिकित्सकीय अध्ययन में पारम्परिक श्रीलंकन चिकित्सा काकोदुम्बरादि तेल, त्रिफला क्वाथ, श्वेतारि रस, कैशोर गुग्गुल मणिभद्र चूर्ण और इथ्रिफल-ए-शाहथिरा (प्रथम समूह) इन आयुर्वेदीय औषधियों के श्वित्र पर प्रभाव का वर्णन किया गया है। श्वित्र व्याधिग्रस्त कुल ३५ रुग्णों को दो चिकित्सा समूहों में बाँटा गया। प्रथम समूह में २५ रुग्णों को उपरोक्त चिकित्सा १२० दिनों तक दी गयी और द्वितीय समूह में १० रुग्णों को प्लासिबो चिकित्सा दी गयी। प्रथम समूह में प्रभावकारी लाभ पाया गया।

गुजरात आयुर्वेद युनिवर्सिटी