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Siddha management for Venpulli (Vitiligo) in Pediatrics: A case study

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Abstract

The uniqueness of Siddha system of medicine is not only curing the ailments but also the mind, to lead a peaceful life. Vitiligo is a common, acquired, discoloration of the skin, characterized by well-circumscribed, ivory or chalky white macules which are flush to the skin surface. It affects 1% of the population worldwide. Both sexes are affected equally. In Siddha system of medicine the diseases are classified into 4448 types. Among 4448 diseases there are 90 skin diseases and 18 kuttam (Leprosy) are mentioned in literature. According to our Siddha literature Venpulli (Vitiligo) comes under the 18 types of Kuttam. It is also called as Venkuttam, Venpadai and Suvetha kuttam. In Siddha medicine child care has been considered so important that it is classified and subdivided into further branches depending on the age starting from early infancy to late childhood. In National Institute of Siddha OPD a considerable number of patients in paediatric population are recorded with symptoms of Venpulli. The case study was carried out in outpatient department of Kuzhanthai Maruthuvam, National Institute of Siddha, Chennai. The clinical assessment was done by VASI score and the results are explained in the article.

Keywords: Venpulli, SIDDHA medicine, VASI score, Parangipattai chooranam

Introduction

Vitiligo is an acquired autoimmune condition that is characterized by the destruction of epidermal melanocytes causing loss of skin pigment. Vitiligo may progress to involve the dermal follicular reserve and to destroy melanocyte stem cells. Although the global prevalence of vitiligo is less than 1%, in some populations, it may be as high as 3% of the population. Classically, vitiligo has been classified into segmental and non-segmental variants, depending on the distribution of skin depigmentation. Vitiligo can cause psychological stress, especially in dark-skinned individuals for whom it causes concerning cosmetic skin changes^[1]. Vitiligo is an autoimmune condition in which multiple immune response genes are believed to be involved^[2].

Studies have shown that vitiligo may be caused by a response to oxidative stress, mediated by T-cells and involving mediators such as tumor necrosis factor alpha (TNF α), heat shock protein 70 (Hsp70), and interleukin 1 alpha (IL-1 α). Melanocyte destruction is initiated by an imbalance in the production of reactive oxygen species (ROS) that causes free radical damage to the skin melanocytes, leading to protein structural damage, cell apoptosis, activation of cytokines, and damage to cell endoplasmic reticulum (ER). The severity of vitiligo may be assessed by measuring superoxide dismutase, a by product of oxidative stress that increases when vitiligo is active but regresses when the lesions become stable^[3, 4, 5]. Cytokines and chemokines such as C-C chemokine ligand 5 (CCL5), CXC chemokine ligand 12 (CXCL12), interleukin 1 alpha (IL-1 α), and tumor necrosis factor alpha (TNF α) have been shown to have a major role in inducing autoantigen presentation and recruitment of antigen-presenting cells (APCs) and activated T-cells and to have a role in destruction of the skin melanocytes, supporting the autoimmune etiology of vitiligo^[1].

The self-image of the vitiligo patients drops considerably and may lead to depression. These patients often develop negative feeling about it. It may be embarrassing and the frustration of resistant lesions over exposed part of hands and feet can lead to anger and disillusionment.

In Siddha medicine child care has been considered so important that it is classified and subdivided into further branches depending on the age starting from early infancy to late childhood. Balavagadam is the branch of medical science of Siddhars which deals with the diseases of children, their essential nature, especially on the functional changes together with planetary influence, morbid diathesis etc. on the treatment.

In National institute of Siddha OPD a considerable number of patients in paediatric population are recorded with symptoms of Venpulli. Children are not aware of this condition because this doesn't cause any illness to them. But it may lead to a complex comparing to others skin

complexion in the schools and their surrounding environment. They may be mentally affected and feel shy which reflects in their academic, attitude and in their performance skill.

In Siddha classical text, there are many herbal and herbomineral preparation which yields a good improvement by repigmentation of the lesion. However, to our knowledge, a case report describes the long-term effects of the Siddha management for vitiligo.

Case Report

A 6 years old female child reported to our Kuzhandhai Maruthuvam (Pediatrics) OPD, National Institute of Siddha, Chennai with the complaints of Depigmented patches in her right hand for past 3 years. Her parents tried many medications for past 2 years. But there is no improvement and finally came to NIS Kuzhandhai maruthuvam OPD. It is diagnosed as VENPULLI (Vitiligo) and Siddha treatment is started.

Envagai theruvukal (Eight fold system of clinical assessment)	
Naadi	Vathapitham/ Pithavatham
Sparisam	Coldness / roughness
Naa	Pallor /coated
Niram	Hypopigmented patches
Mozhi	Low pitched /normal
Vizhi	Normal/ pallor
Malam	Normal / constipation
Moothiram	
Neerkuri	Yellowish in colour, tamarind odour
Neikkuri	Oil may spread in the form of a ring/pearl.

Line of Treatment

Internal medicine: *Parangipattai chooranam* (500 mg with Palm jaggery/ Sugar – BD, after food) for 48 days [6].

External medicine: *Anabedhi chendooram* (with lemon juice) for 48 days [7].

Treatment Outcome

Pigmentation was recorded before and after treatment with the help of VASI Score.

Clinical assessment – VASI Score

Hamzavi *et al.* [8] have introduced a quantitative parametric score, named VASI for Vitiligo Area Scoring Index, which is conceptually derived from the PASI score widely used in psoriasis assessment [9]. The total body VASI is calculated using a formula that includes contributions from all body regions (possible range, 0–100). One hand unit, which encompasses the palm plus the volar surface of all the digits, is approximately 1% of the total body surface area [10] and is used as a guide to estimate the baseline percentage of vitiligo involvement in each body region. The body is divided into five separate and mutually exclusive regions: hands, upper extremities (excluding hands), trunk, lower extremities (excluding feet), and feet. The axillary region is included with the upper extremities while the buttocks and inguinal areas are included with the lower extremities. The extent of residual depigmentation is expressed by the following percentages: 0, 10%, 25%, 50%, 75%, 90%, or 100% [11, 12].

- 1 (100%) - Complete depigmentation, no pigment is present
- 0.90 (90%) - Specks of pigment present
- 0.75 (75%) - Depigmented area exceeds the pigmented area
- 0.50 (50%) - Pigmented and depigmented areas are equal
- 0.25 (25%) - Pigmented area exceeds depigmented area

- 0.10 (10%) - Only specks of depigmentation present.

Results and Discussion

The baby was treated with the drug Parangipattai chooranam (Internal) and Annabedhi chendooram (External) for 48 days. The clinical assessment is done using VASI score. Before treatment the VASI score is 5 and after treatment it is reduced to 3.5 that indicate a very good impact on the pigmentation of the affected area.

In this study, ingredients of the trial drug Parangipattai chooranam are parangipattai and karunthulasi. The ethyl acetate fraction of parangipattai showed the highest antioxidant property and the alcoholic extract of parangipattai protects the induction of lipid peroxidation [13]. Karunthulasi has antioxidant, immunomodulatory and anti-stress activity which shows the trial drug Parangipattai chooranam helps to change the pathology of vitiligo which in turn causes pigmentation [14].



Fig 1: Before treatment



Fig 2: After treatment

Conclusion

Hence the use of Siddha medicine is a safe and extremely efficacious drug towards the management of Venpulli (Vitiligo) in children which takes a huge toll of inducing psychological stress and impact on the cosmetic purposes. This single case study also strengthens the theory of Venpulli can be treated with Siddha medicines with proper management.

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