EVALUATION OF SAFETY AND THERAPEUTIC EFFICACY OF SIDDHA FORMULATION PANCHAMUGA CHENDURAM (INTERNAL MEDICINE) AND POOVARASAM PATTAI ENNAI (EXTERNAL MEDICINE) ON VITILIGO PATIENTS (VENPADAI)

Muralidass S D¹, Ramaswamy R S ², Muthukumar N J ³, Mahalakshmi V⁴, Mahadevan M V ⁵, Periyasami D ⁶

1* Medical Officer, Siddha Central Research Institute, Chennai
2 Director General, Central Council for Research in Siddha, Chennai
3 Associate Professor, Dept of Sirappu Maruthuvam, National Institute of Siddha, Chennai
4, 5, 6 Lecturers, Dept of Sirappu Maruthuvam, National Institute of Siddha, Chennai

ABSTRACT

An open clinical trial of Panchamuga Chenduram (Internal medicine) and Poovarasam Pattai Ennai (External medicine) for Venpadai (Vitiligo - hypopigmented patches of irregular shape in the epidermis of skin) patients. Patients were diagnosed clinically and admitted for the trial. The above study was get approval from Institutional Ethical Committee (IEC) of National Institute of Siddha (NIS). The evaluation the therapeutic efficacy of the above drugs were carried out in the patients of Venpadai (Vitiligo) and assessment were analysed and the results are presented. There was a significant improvement in production of repigmentation and reduction of the size of the hypopigmented patches.

Keywords: Venpadai, Panchamuga Chenduram, Poovarasam Pattai Ennai, NIS, Siddha

Corresponding Author: Dr. S. D. Muralidass, Email id: drmuralinis@gmail.com

INTRODUCTION

Siddha system is an integral part of socio-cultural milieu of Tamil Nadu. The history of Siddha medicine is as old as the history of the Tamil culture and civilization.¹ The contribution of Siddhars to Siddha literature with its boundless therapeutics and wonderful pharmaceutical medicine preparations is acclaimed par excellence even in this 20th century owing to remarkable results.² In Siddha system of medicine, Vitiligo is described as Venpadai. Vitiligo is an acquired idiopathic depigmentary condition, which though worldwide in distribution,
most common in India, Egypt and other tropical countries.$^3$ Vitiligo affects approximately 1-4\% of the world population.$^4$ Adults and children of both sexes are equally affected although the greater number of reports among females is probably due to the greater social consequences to women and girls affected by this condition.$^5$

Scientifically validated and technologically standardized AYUSH products may be explored on a fast track using innovative approaches like reverse pharmacology and systems biology, which are based on traditional medicine knowledge.$^6$

**MATERIALS AND METHODS**

This open clinical trial was carried out with the approval from Institutional Ethical Committee (IEC) of NIS (Ethical Committee Clearance Certificate No - F.No.NIS/6-20/Res/IEC/10-11 Dated on 29.11.2010). The required drugs for preparation of trial medicines were purchased from a well reputed country shop and were authenticated by the faculty members of Department of Gunapadam and Department of Medicinal botany of NIS. The trial medicines were prepared in the Gunapadam Laboratory of NIS as per Sastric methods. After getting the proper approval from IAEC of NIS (Institutional Animal Ethical Committee Certificate no - NIS/3-1/2011-12) the Acute Toxicity Study of internal drug *Panchamuga Chenduram* was done at Animal House, NIS. Bio-chemical analysis and Physio-chemical analysis of internal drug *Panchamuga Chenduram* were also done at Sophisticated Analytical Instrument Facility, IITM, Chennai-36.

This study was conducted in 40 patients in the Department of Sirappu Maruthuvam, Ayothidoss Pandithar Hospital, National Institute of Siddha (NIS), Tambaram Sanatorium, Chennai-47. The following trial medicines were given for 48 days (One Mandalam). The Internal Medicine; *Panchamuga Chenduram* was given to patient in a dose of 100 mg twice a day with Honey as adjuvant$^7$ and the external medicine; *Poovarasam Pattai Ennai* was also applied daily in the affected parts twice a day for a period of 48 days$^8$. Purgation with *Viresana Boopathy Tablet* - 2 No early morning with hot water was given for balancing the deranged Mukkutram a day before treatment. Laboratory investigations were done on 0$^{th}$ day, 24$^{th}$ day and 49$^{th}$ day of the trial. Photographs of lesions were taken before, during and after the trail.
ACUTE TOXICITY STUDY (WHO GUIDELINES, 1993)

The animals were monitored for behavioral parameters like 1. Awareness (Alertness, Visual placing, Stereotype, Passivity) 2. Mood (Grooming, Restlessness, Irritability, Fearfulness) 3. Motor activity (Spontaneous activity, Reactivity, Touch response, Pain response). For the first four hours after doing administration, body weights of the animal were monitored at weekly interval. The animals were monitored for apparent signs of toxicity for 14 days. The animals that die within this period will be subjected to necropsy. All animals were weighed and sacrificed on the 15th day after administration and then the vital organs including heart, lungs, livers, kidneys, sex organs and brain were grossly examined. In the acute toxicity in animal models reveals no abnormality hence the drug is found safe.

<table>
<thead>
<tr>
<th>S. No</th>
<th>Group</th>
<th>No of mice</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Vehicle control (Saline)</td>
<td>10 (5 male, 5 female)</td>
</tr>
<tr>
<td>2</td>
<td>Toxic dose (10X therapeutic dose-36mg)</td>
<td>10 (5 male, 5 female)</td>
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<td></td>
<td>(Single dose-(0.36mg))</td>
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INGREDIENTS OF INTERNAL MEDICINE (PANCHAMUGA CHENDURAM)

- RASAM
- NELLIKKAI GANTHAGAM
- VEERAM
- THALAGAM
- KAATTAMANAKKU
- PANCHAMUGA CHENDURAM
INGREDIENTS OF EXTERNAL MEDICINE (POOVARASAM PATTAI ENNAI)

POOVARASAM PATTAI               GINGELLY OIL               POOVARASAM PATTAI ENNAI

DISCUSSION

Among the several cases of Vitiligo reported in NIS hospital, 40 patients were studied through Vitiligo Clinical Assessment Scale and the results are presented. In this study it was found that the trial drugs Panchamuga Chenduram and Poovarasam Pattai Ennai are effective in producing repigmentation and reducing the size of the hypopigmented patches in the treatment of Vitiligo (Venpadai).

1. Vitiligo Clinical Assessment Scale

<table>
<thead>
<tr>
<th>Parameter</th>
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<th>+</th>
<th>++</th>
<th>+++</th>
<th>++++</th>
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</thead>
<tbody>
<tr>
<td>Change in color</td>
<td>No change</td>
<td>Yellowish tint</td>
<td>Slight contrast</td>
<td>No contrast</td>
<td>100% remission</td>
</tr>
<tr>
<td></td>
<td></td>
<td>lesion color</td>
<td>between lesion</td>
<td>between lesion</td>
<td>in all treated</td>
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<tr>
<td></td>
<td></td>
<td>and surrounding</td>
<td>color and</td>
<td>color and</td>
<td>lesions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>skin color</td>
<td>surrounding skin</td>
<td>surrounding skin</td>
<td></td>
</tr>
<tr>
<td>Change in size</td>
<td>No change</td>
<td>Up to 5 mm</td>
<td>Up to 10 mm</td>
<td>More than 10 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>reduction in</td>
<td>reduction in</td>
<td>reduction in</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>diameter</td>
<td>diameter</td>
<td>diameter</td>
<td></td>
</tr>
<tr>
<td>Folliculocentric repigmentation</td>
<td>No repigment</td>
<td>Up to 5 mm</td>
<td>Up to 10 mm</td>
<td>More than 10 mm</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>perifollicular</td>
<td>perifollicular</td>
<td>perifollicular</td>
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<tr>
<td></td>
<td></td>
<td>repigmentation</td>
<td>repigmentation</td>
<td>repigmentation</td>
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</table>

-, No response; +, mild response; ++, moderate response; ++++, marked response; ++++, complete response.
2. Reduction in Size after Treatment

![Reduction in Size Graph](image)

3. Repigmentation Pattern after Treatment

![Repigmentation Graph](image)

4. Results after Treatment

![Improvement Graph](image)

4. Photographs showing the Vitiligo patch of left upper scapular region at entry, during and after treatment. (Patient’s OP No: B 17944 Age: 41 Sex: Male)

Before Treatment 1st Visit (27.07.11) 2nd Visit (08.08.11)
RESULTS

The clinical study reveals that the trial drug showed Grade 2 – moderate improvement in 12.5% of the cases, Grade 3 – mild improvement in 75% of the cases, Grade 4 – no improvement in 22.5% cases. Clinically, no adverse effects were reported during the trial and the laboratory investigations were also within normal limits. So, the drug is assumed to be safe for humans. Acute toxicity study in animal models reveals that the internal drug “Panchamuga Chenduram” is safe. The safety of the trial drug was proved from this study. It was also observed during this trial that no new lesions were formed and there was no increase in any existing lesion was found in all the 40 patients.

CONCLUSION

This clinical study results showed significant reduction in the size of the hypopigmented patches and the production of repigmentation in the Vitiligo patches and suggesting that daily long term administration of the drug could be safe. No complications were observed during the course of the study. All the patients responded to the drug well and were very comfortable and no new lesions were formed and there was no increase in any existing lesion was found in all the 40 patients. Because of the encouraging clinical results, it could be concluded that the trial
medicines are effective in producing repigmentation and reducing the size of the hypopigmented patches in the treatment of Vitiligo

ACKNOWLEDGMENT

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